

The Death Valley Climate Book

Chris Stachelski
National Weather Service Las Vegas





The Death Valley Climate Book is a publication produced by the staff at the National Weather Service Office in Las Vegas, Nevada. All data in this publication was obtained from the official forms, publications, digital datasets and record books for this station. All normals, unless noted, were produced by NOAA's National Centers for Environmental Information (NCEI). NCEI's Asheville, North Carolina office should be contacted for certified weather data.

Information in this publication was last updated on January 13, 2016.

Table Of Contents

Introduction	1
Current Station Information	1
Temperature Record	2
Temperature Overview	3
Daily Temperature Normals and Records	4
Monthly and Average Annual Temperatures	17
Highest and Lowest Temperatures Recorded	36
Number of Days With Specified Temperatures	54
Number of Consecutive Days With Specified Temperatures	56
Earliest and Latest Dates With A Specific Threshold	58
Average Extreme Temperatures By Month	59
Heating and Cooling Degree Days	60
Precipitation Record	61
Observation Date Precipitation Records	62
24 Hour Maximum Precipitation Records By Month and Greatest Ever	74
Monthly and Annual Precipitation	75
Number of Days	95
Consecutive Days	99
Snow	100
Evaporation	101
Total Evaporation By Month and Year	104
Average Daily Evaporation By Month and Year	105
Holiday Weather	108
El Niño and La Niña Episodes	113
Methodology	113
Precipitation	114
Temperature	118
Low Temperatures of 32 Degrees or Below	120
Acknowledgements	122

Introduction

Death Valley, California has attracted significant attention, both on a national and international scale, due to the exceptionally high temperatures and prolonged dry periods that it experiences. In order to provide a thorough summary on the climate, historical weather events as well as the history and methodology of weather observations for Death Valley, the publication *A Century of Weather In Death Valley: 1911-2011* was composed. With climate information needing to be kept up to date, *The Death Valley Climate Book* was compiled to serve as a companion publication was developed in order to provide a more easily accessed set of records and normals on Death Valley. This publication also features normals that were developed by the NOAA's National Centers for Environmental Information (NCEI) in Asheville, North Carolina as well as by the author for select statistics that use a 30 year period that changes every ten years.

Current Station Information

The information used in this publication was taken from the observations recorded at the official weather station for Death Valley. The weather station was located at 194 feet below sea level and was located at the Furnace Creek Visitor Center in an area over open dirt with native desert vegetation nearby. Equipment currently consists of a Campbell Scientific automated weather station that has an electronic temperature sensor, tipping bucket rain gauge, humidity sensor, wind vane and anemometer as the primary weather equipment. A wooden, white painted cotton region shelter housing liquid-in-glass maximum and minimum thermometers and an eight inch standard rain gauge remain on site as official back-up equipment. Observations are presently taken once per day at 2359 Pacific Standard Time (PST) as of November 2, 2015. More detailed information on the history and methodology of taking weather observations at Death Valley can be found in *A Century of Weather In Death Valley: 1911-2011*. Methodology used in this publication continued through November 1, 2015 as the official methodology.

Temperature Record

Readings of temperatures at Death Valley are made officially once a day generally at designated observing time determined as part of the agreement between the observer and the National Weather Service. Data collected each day has typically consisted of a high temperature and low temperature for a twenty four period ending at the time of observation as well as the temperature at the time of observation. Over the years this time of observation has changed with most of the dataset having an observation time that took place during the evening. From , as well as in earlier periods, a morning observation time is used which results in the high temperature typically being from the previous day. In order to have a more accurate temperature record that better reflects the daily extremes over the course of the station's history, the author of this report established a methodology. For more details on this methodology and additional quality control measures performed on the records of Death Valley, please see the section *The Approach To Construct A More Accurate Temperature Record* in the publication *A Century of Weather In Death Valley: 1911-2011*.

Daily records of temperature in Death Valley started on June 8, 1911. All temperature data is given in degrees Fahrenheit. An overview of each month's temperatures is listed below, followed by normal and record extremes for each day and month. Normals are from 1981-2010 and provided by NOAA's National Centers for Environmental Information (NCEI).

Month	Normal Average Maximum Temperature	Normal Average Minimum Temperature	Normal Average Temperature
January	66.9	40.0	53.4
February	73.3	46.3	59.8
March	82.1	54.8	68.4
April	90.5	62.1	76.3
May	100.5	72.7	86.6
June	109.9	81.2	95.5
July	116.5	88.0	102.2
August	114.7	85.7	100.2
September	106.5	75.6	91.0
October	92.8	61.5	77.1
November	77.1	48.1	62.6
December	65.2	38.3	51.7
Annual	91.4	62.9	77.2
All normals are based on the period from 1981 – 2010.			

Month	Record Highest Maximum	Record Lowest Maximum	Record Highest Minimum	Record Lowest Minimum
January	87 on 1/25/2015*	38 on 1/21/1937	70 on 1/26/1934	15 on 1/8/1913
February	98 on 2/28/1986	44 on 2/9/1920	68 on 2/27/1963	21 on 2/13/1933
March	104 on 3/31/2015	55 on 3/12/1937	77 on 3/30/1978	26 on 3/4/1989
April	113 on 4/22/2012*	59 on 4/10/1927*	87 on 4/15/1947	35 on 4/6/1921
May	122 on 5/29/2000	60 on 5/5/1921	94 on 5/20/2008	42 on 5/7/1930*
June	129 on 6/30/2013	74 on 6/6/1925	102 on 6/16/1917	49 on 6/2/1923
July	134 on 7/10/1913	85 on 7/8/1918	110 on 7/5/1918	62 on 7/1/1927
August	127 on 8/2/1993*	80 on 8/18/1983	106 on 8/1/1920	65 on 8/27/1972*
September	123 on 9/1/1996	76 on 9/20/2005*	100 on 9/18/1927	41 on 9/22/1924
October	113 on 10/1/2012*	61 on 10/30/1920	85 on 10/8/1964*	32 on 10/13/1924*
November	97 on 11/1/1966*	45 on 11/27/1919	75 on 11/8/1913	24 on 11/27/1921
December	89 on 12/3/1949	38 on 12/23/1990	70 on 12/23/1914*	19 on 12/27/1924
Annual	134 on 7/10/1913	38 on 12/23/1990*	110 on 7/5/1918	15 on 1/8/1913
Daily records started on June 8, 1911.				
*Date listed above is most recent occurrence.				

January

Period of Record: 1912-2016

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	64	38	79/1936	48/1991	59/1931	21/1919
2	65	38	80/2001	48/1991	64/1931	22/1991*
3	65	38	81/1997	46/1991	64/1931	22/1974*
4	65	38	76/1943*	44/1974	54/1932*	22/1950
5	65	38	77/1981	44/1974	52/1926	19/1950
6	65	38	82/2003	45/1993*	57/2008	20/1950*
7	65	39	84/2003*	46/1937	54/2003*	19/1950
8	65	39	87/1962	40/1937	58/1962*	<u>15/1913</u>
9	66	39	83/1962	43/1937	65/1962	16/1913
10	66	39	83/1943	41/1930	55/1995	21/1937
11	66	39	83/1983	41/1949	57/2005	22/1937
12	66	39	81/1983	44/1949	51/1980	23/1919
13	66	39	82/1942	47/1949*	55/1979*	20/1963
14	67	40	82/2014	45/1916	58/1979	22/1913
15	67	40	80/2003	48/1919	54/1978	23/1963
16	67	40	84/2014	48/1917	50/1979	23/1963
17	67	40	80/1912	49/1917	53/1967	22/1919
18	67	40	81/2009	50/1917	52/1923	20/1928
19	67	41	82/1944	51/1917	57/1976	18/1928
20	68	41	82/1923	40/1937	57/1969	20/1928
21	68	41	81/1975	38/1937	64/1969	20/1928
22	68	41	84/1968	40/1937	60/1967	20/1929*
23	68	41	83/1968	45/1937	56/1923	22/1928
24	68	41	83/2015	48/1937	56/2014	22/1928
25	69	42	87/2015	49/1937	59/1999	21/1937
26	69	42	85/1912	50/1937	70/1934	25/1937*
27	69	42	82/1931	49/1957	62/1934	25/1950
28	69	42	86/1966	52/1957	55/1984*	27/1950
29	69	42	82/1931	53/1979	54/1987	25/1948
30	70	43	81/2009	52/1979*	56/1963	27/1945
31	70	43	86/1954	49/1979	58/1963	28/2002

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

February

Period of Record: 1912-2015

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	70	43	86/1912	46/1979	61/1935	28/2002*
2	70	43	86/1935	52/1979*	60/1935	27/1923
3	70	43	84/1935	49/1939	58/2005	26/1932
4	71	44	83/1935	57/1985*	56/1976*	25/1932
5	71	44	87/1967	53/1985	59/1961	29/1985
6	71	44	89/2015	48/1989	56/1915	26/1985
7	71	44	88/1912	50/1989	58/1980*	26/1985
8	71	44	86/1954	46/1989	57/1915	28/1933
9	72	45	91/2006	44/1920	66/2015	28/1933
10	72	45	85/2006	54/1982	63/1962	29/1946*
11	72	45	90/1996	53/1986	60/1922*	32/2001*
12	72	45	90/1996	57/1986	62/1951	28/1933
13	73	46	90/1996	52/1949	57/1951*	21/1933
14	73	46	89/1991*	53/1990	63/1957	29/1949
15	73	46	89/1977*	57/1990*	64/1957	29/1990*
16	74	47	90/1913	53/2009	59/1987	26/1956
17	74	47	90/1981	60/1932	59/2007*	29/1990
18	74	47	90/1981	55/1918	58/1970*	32/1929
19	74	48	90/1995	53/1969	58/1915*	34/1929
20	75	48	89/1995	61/1953	66/1996	33/1919
21	75	48	88/1995*	61/1922	62/1963	32/1919
22	75	48	89/1943	57/1998	63/2015	33/1919
23	76	49	91/2012	59/1969*	66/1963	31/1919
24	76	49	93/1986	62/1920	61/1973	34/1929
25	76	49	94/1989*	57/1987	61/1917	29/1919
26	77	50	96/1986	56/2001*	62/1915	30/1919
27	77	50	97/1986	54/1962	68/1963	30/1921
28	77	50	98/1986	55/1993	62/1986*	32/1962
29	77	51	89/2008	65/1960	61/1940	37/1928

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

March

Period of Record: 1912-2015

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	78	51	94/1986	61/1945	70/1936	34/1919
2	78	51	91/1986*	60/1951	76/1936	35/1985*
3	78	51	92/1986*	60/1951	65/1967	34/1971*
4	79	52	96/1986	60/1976*	66/1957	26/1989
5	79	52	97/1972	64/2000*	68/1957	35/1997*
6	79	52	96/1972	64/2000*	66/1936*	36/1966
7	80	53	96/1972	64/1952	67/1936	36/1966
8	80	53	96/1972	59/1922	67/1934	34/1919
9	80	53	96/1972	65/1969*	72/1914	39/1964
10	81	53	98/1972*	62/1969	71/1989	40/1962*
11	81	54	98/1916	60/1917	74/1989	30/1919
12	81	54	97/2007*	55/1973	65/1994	37/1956
13	81	54	98/2007	61/1973	69/1994	35/1990
14	82	55	99/2007	62/1944	66/1972	39/1919
15	82	55	99/2007	58/1987	71/2003	30/1919
16	82	55	102/2007	59/1930	72/1972	36/1919*
17	83	55	102/2007	56/1982	72/2013	35/1919
18	83	56	98/1947*	65/1927*	75/1916	38/1917
19	83	56	97/2004*	64/1987	75/1916	41/1998*
20	83	56	101/2004	59/1991	71/2013	41/1945
21	84	56	102/2004	62/1919	72/1978	40/1952
22	84	56	99/2004*	60/1920	72/1972	39/1919
23	84	57	99/1990	62/1920	72/1967	41/1917
24	84	57	98/1990	65/1927	74/1930	40/1921
25	85	57	100/1930	67/1980	75/1940	42/1913
26	85	57	100/1988	60/1920	73/1971	38/1977
27	85	57	99/2015	62/1920	75/1960	38/1913
28	85	58	102/2015*	65/1975	70/1957	39/1913
29	86	58	101/2015	69/1977	71/1943	42/1998
30	86	58	103/2015	68/1977	77/1978	41/1998
31	86	58	104/2015	68/1949	72/2011	44/1925

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

April

Period of Record: 1912-2015

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	86	58	105/1966	66/1940	73/2003*	44/1917
2	87	59	103/1966	63/1997	72/1960	41/1998
3	87	59	105/1961	71/1965	72/2011*	42/1945
4	87	59	104/2000	61/1965	83/1914	40/1921
5	87	59	103/2000*	59/1926	74/1969*	40/1921
6	88	59	108/1989	65/1921	76/1953	35/1921
7	88	60	109/1989	65/1958	79/1960	41/1932
8	88	60	110/1989	61/2011	80/1930	40/1921
9	89	60	110/1989	67/1965	79/1951	39/1999
10	89	60	108/1989	59/1927	80/1972	42/1929
11	89	61	107/1934	67/1941*	77/1972	44/1929
12	89	61	107/1934	62/1941	78/2014	45/1965*
13	90	61	107/2002	70/1922*	79/1914	36/1912
14	90	61	109/2002	65/1939	77/1935*	46/1938*
15	90	62	108/1947	69/1988	87/1947	44/1998*
16	91	62	107/1947	64/1927	82/1947	45/1921
17	91	62	107/1954*	71/1920	82/1947	43/1917
18	91	63	108/1954*	63/1995	83/1947	43/1985
19	91	63	108/1994*	71/1967	81/1947*	48/1995*
20	92	63	109/1994	71/1967	85/1989	42/1912
21	92	64	110/2012	71/1925	83/1989	46/2010*
22	92	64	113/2012	72/2010*	79/1986*	48/1928*
23	93	64	110/2012	73/2003	79/2012*	45/1937
24	93	65	113/1946	68/1921	81/1975*	45/1921
25	93	65	109/1946*	71/1984	82/1946	45/1921
26	94	65	110/1996	75/1984*	79/1987*	49/1989
27	94	66	110/2000	75/1984	78/1953*	47/1963
28	94	66	110/2007	70/1970	82/1916	46/1970
29	95	67	112/2007	65/1914	85/1921	42/1967
30	95	67	111/1981	66/1914	83/1977	50/1955*

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

May

Period of Record: 1912-2015

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	96	67	111/1981	69/1915	80/2012	51/1937
2	96	68	112/1947	70/1915	84/1981	51/1933
3	96	68	116/1947	77/1950*	83/1985	51/1933
4	97	68	114/1947	74/1930	83/2014*	53/1950*
5	97	69	116/1947	60/1921	85/1947	45/1921
6	97	69	112/1989	65/1921	83/1931	47/1988
7	98	70	114/1989	67/1921	83/1962*	42/1930
8	98	70	112/2001*	77/1955	86/1954	51/1932*
9	98	70	112/2001	68/1977	84/1989	45/1928
10	99	71	111/2001*	68/1918	80/2004	50/1928
11	99	71	115/1960	70/1933	85/2001	46/2000
12	99	72	116/1996	76/1998	86/1960	49/1989
13	100	72	116/1997	72/1998	87/1927	50/1998
14	100	72	115/1997	83/1995	89/1937	46/1998
15	100	73	118/1927	81/2011*	88/2006	54/1953*
16	101	73	114/2006	78/2011	87/1937	53/1953
17	101	73	116/2012*	63/1921	86/2012	55/1921
18	101	74	118/2009*	83/1991*	87/1954	42/1921
19	102	74	120/2008	75/1921	93/1954	45/1921
20	102	74	118/2008	75/1921	94/2008	55/1928
21	102	75	117/2012	75/1921	90/1954	49/1975
22	103	75	118/2000	70/1957	86/1979*	44/1922
23	103	75	119/2000	70/1921	89/1984	50/1921
24	103	76	119/2001	78/1927	90/1943	48/1978
25	103	76	120/1913	80/1927	87/1947	48/1978
26	104	76	119/1951	84/1953	87/1951*	58/1917
27	104	76	117/2014*	75/1918	91/1984	55/1998
28	104	77	121/2003	80/1918	88/2000*	58/1962
29	105	77	122/2000	68/1918	91/2003	55/1953*
30	105	77	118/2002*	85/1921	90/1939	50/1927
31	105	77	119/2012	80/1948	91/2001	53/1923

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

June

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	106	78	121/2001	83/1967	92/1922	52/1923
2	106	78	119/2003	88/1999	91/2013*	49/1923
3	106	78	120/1996	83/1999	91/1939	60/1923
4	106	78	122/1996	86/1933	94/2013	58/1998
5	107	79	121/1996*	76/1993	93/2013	54/1925
6	107	79	121/2002*	74/1925	95/1927	54/1993
7	107	79	123/2013*	82/1995	93/2006	55/1995
8	108	79	126/2013	90/1995	92/2003	57/1995
9	108	80	125/2013	88/2004	96/2013	57/1912
10	108	80	120/1994*	87/1964	92/1955	60/1913
11	109	80	121/1921	92/1976	92/1949	54/1928
12	109	80	124/1918	90/1943	92/1936*	61/1928
13	109	81	123/1918	79/1997	100/1918	59/1998
14	110	81	122/2000*	86/1997	93/1940	57/1997
15	110	81	126/2000	87/1962	96/2007*	58/1997
16	110	81	123/1917	83/1995	102/1917	56/1923
17	110	82	122/1917	89/1969*	94/1961*	50/1921
18	111	82	121/2008*	92/1979	94/1961	57/1923*
19	111	82	123/1961	93/1975	96/1985*	60/1979
20	111	82	125/1961	88/1938	97/1915	57/1979
21	112	83	125/1961	90/1923	97/1915	60/1923
22	112	83	124/1961	89/1923	100/1961	63/1944
23	112	83	124/2011*	94/1912	98/1981*	60/1912
24	113	83	125/2006	100/1952	98/1959	58/1912
25	113	84	125/2006	96/1975	95/1974*	65/1950
26	113	84	126/1994	90/1928	93/2002*	64/1965
27	113	84	126/1994	90/1928	101/1994	64/1913
28	114	85	125/2013*	85/1920	100/1918	63/1913
29	114	85	128/2013*	90/1920	98/1956	60/1920
30	114	85	129/2013	89/1982	100/1918	61/1927

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

July

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	114	85	127/2013	98/1982	98/2013	62/1927
2	115	86	127/2013*	100/1935	104/2013	67/1975
3	115	86	128/2013	96/1912	102/2013	69/1992*
4	115	86	126/2013*	100/1921	100/1915	67/1992*
5	115	86	127/2007	103/1982	110/1918	64/1921
6	116	87	129/2007	102/2001	99/2013	63/1928*
7	116	87	127/1989*	103/2001	97/1927	67/1923
8	116	87	128/1913	85/1918	100/1927	70/1933
9	116	87	129/1913	88/1926	101/2008	68/1933
10	116	88	134/1913	98/1936	100/1927*	71/1928
11	116	88	129/1913	103/2013	105/1920	65/1928
12	117	88	130/1913	95/1918	107/2012	73/1926
13	117	88	131/1913	103/2012	100/2002	72/1995
14	117	88	128/1972	99/1932	100/1925	73/1912
15	117	88	128/1972	101/1986	100/1949	73/1928
16	117	89	127/2006*	106/1993	100/2005*	74/1944*
17	117	89	129/1998	99/1987	100/1959*	73/1931*
18	117	89	129/1960	96/1987	102/2010	69/1987
19	117	89	129/2005	101/1987	102/1960	75/2015*
20	117	89	126/1931	92/1987	101/2005	69/2015
21	117	89	124/2003*	98/1987*	101/2005	69/1987
22	117	89	125/2003*	91/1997	105/1917	70/1925*
23	117	89	127/1916	94/1984	102/2003	72/1984
24	117	89	126/2006*	102/1982	103/1916	70/1925
25	117	89	126/2006	102/1982	99/1964	73/1997
26	117	89	127/1933	90/1982	101/1980*	68/1938
27	117	89	127/1933	101/1984	102/2006	75/1982*
28	117	89	126/1995	100/1941	100/1943*	73/1931
29	117	89	127/1995	100/1999	100/1928*	71/1997*
30	117	89	124/2002*	98/1936	98/2010*	70/1931
31	117	89	125/1920	100/1918	100/1921	70/1931

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

August

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	117	89	126/1993	100/1918	106/1920	70/1946
2	117	89	127/1993	103/1922	100/1916	74/1928
3	117	88	125/1992	89/2014	100/1921	71/1944
4	117	88	124/1998	103/2014*	100/1925	69/1928
5	116	88	125/1998*	105/1976*	100/1915	67/1931
6	116	88	126/1998*	102/1982	99/1975*	72/1931
7	116	88	125/1998*	102/2009*	99/1947	68/2009
8	116	88	126/2012	100/1921	101/1920	72/1941
9	116	88	126/2012	97/1983	99/2012*	74/2009
10	116	87	125/2004	96/1942	100/1915	71/1945
11	116	87	126/1933	99/1941	100/1970*	74/1941
12	116	87	127/1933	89/1979	100/1937*	69/1923
13	115	87	125/1996*	99/1931	100/1958*	70/1923
14	115	86	124/2002*	99/1968	100/1924	72/1928*
15	115	86	124/2002*	82/1984	97/2008*	72/1933
16	115	86	125/1994	95/1983	98/2008*	69/1945
17	115	86	124/2001*	85/1977	99/2013*	72/2009*
18	115	86	125/2001	80/1983	98/2013	70/1912
19	114	85	124/1992	81/1983	99/2003*	68/1923*
20	114	85	123/1919	95/1983	98/1999*	65/1921
21	114	85	122/2009	94/1968	100/1919	70/1996
22	114	84	121/2006*	95/1968	98/1915	67/1947
23	114	84	123/1913	94/1921	95/1915	68/1947
24	113	84	124/1926*	86/1920	96/1991	69/1968
25	113	84	123/1913	93/1920	98/1991	67/1944
26	113	83	122/2011	91/1920	95/2007	69/1948*
27	113	83	124/2011*	95/1920	95/2011*	65/1972
28	113	83	123/1998	101/1920	98/1971	70/1926
29	112	82	124/1998	96/2000*	97/1929	66/2002
30	112	82	124/1998	96/1957*	96/2013*	65/1930
31	112	82	121/1996	97/1931	95/2013*	65/1945*

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

September

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	112	81	123/1996	95/2000	100/1924	62/2000
2	111	81	122/2007	95/2000*	100/1924	67/1944
3	111	81	121/2007	96/1985	100/2007*	67/1964*
4	111	80	120/1955	87/1912	100/2007	63/1912
5	110	80	118/2006*	91/1985*	95/2013	56/1912
6	110	80	119/1955	95/1991	96/2013	59/1912
7	110	79	121/1932	90/1950	98/1913	60/1921
8	110	79	118/2012*	94/1912	92/1979	63/1921
9	109	79	120/1923	93/1985	95/2012	62/1924*
10	109	78	119/1993*	89/1985	95/2012	60/1918
11	109	78	119/1993*	87/1976*	93/1923*	62/1931*
12	108	77	118/1971*	92/1976	96/1937	61/1985*
13	108	77	120/1971	93/1939	90/2007*	60/1928
14	107	77	119/1971*	90/1936	89/1979	59/1928
15	107	76	119/2014*	92/1986*	97/1971	55/1927
16	107	76	119/2014	82/1982	96/1927	52/1921
17	106	75	118/2000	90/1977*	98/1927	55/1921
18	106	75	118/1937	77/1963	100/1927	58/1924
19	105	74	116/2000*	76/1963	97/1927	58/1924
20	105	74	116/1913	76/2005	95/1927	56/1965*
21	105	73	115/1949	77/1988	90/1927	45/1924
22	104	73	115/1949	86/2007	86/1991	41/1924
23	104	72	118/1949	85/2007	86/1915	52/1945
24	103	72	114/1962*	77/1920	87/1915	45/1924
25	103	71	115/2015	76/1997	83/1964*	48/1948
26	102	71	116/2003	80/1920	84/1962	50/1928
27	102	71	115/2010	84/1986	83/1958*	51/1928
28	101	70	114/1962	87/1982	86/1938	45/1924
29	101	70	114/2003*	82/1982	84/1915	46/1924
30	100	69	113/2003*	82/1983	88/1962	45/1928

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

October

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	100	69	113/2012	78/1930	85/1920	54/1950*
2	100	68	113/1980	69/1986	85/1929	42/1912
3	99	68	112/1980	82/1919	85/1943	51/1928
4	99	67	111/1980	80/1916	85/1963	50/1928*
5	98	67	110/1987	75/2015	79/1943	51/1928
6	98	66	109/1996*	76/1916	83/1943	46/1927
7	97	66	112/1996	76/1916	80/1943	43/1927
8	97	65	112/1996	74/1949	85/1964	42/1927
9	96	65	109/2015	75/1985	76/2012	41/1927
10	96	64	109/1991	70/1960	77/1958	40/1924
11	95	64	108/1991	71/1920	79/1980	32/1924
12	95	63	107/2015*	70/1920	80/1968	32/1924
13	94	63	107/2015	75/1925*	80/1959	32/1924
14	94	62	108/1991	71/2006	80/1954	40/1928
15	93	62	108/1991	77/1984	79/1917	35/1924
16	93	61	104/1988*	76/1980	78/1964	36/1924
17	92	61	110/1927	71/1971	80/1914	38/1924
18	92	61	106/1927	74/1984	74/1964	35/1924
19	91	60	105/1991*	68/1949	80/1913	34/1924
20	91	60	104/1988*	71/1949	82/1913	35/1924
21	91	59	102/2003*	72/1920	74/2014*	33/1924
22	90	59	105/1913	69/1941	72/2012*	34/1924
23	90	58	101/1959*	65/1921	76/1959	35/1924
24	89	58	102/1959	69/1941	76/1914	36/1924
25	89	57	99/2003*	65/1921	73/1914	37/1921
26	88	57	98/2003*	70/1921	72/2003*	35/1924*
27	88	57	100/1934	70/1919	79/1943	39/1924
28	87	56	104/1934	66/1996	73/1974	40/1928*
29	87	56	99/1962	63/1971	72/1958	41/1928
30	86	55	96/1988	61/1920	73/1914	40/1971
31	86	55	98/1988*	65/1996*	70/1959	38/1971*

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

November

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	85	55	97/1966	61/1920	74/1966	40/1935*
2	85	54	97/1931	63/1920	70/1914*	37/1919
3	84	54	94/2010*	65/1920	73/1914	41/1943*
4	83	53	94/2010	69/1994	68/2008*	40/1919
5	83	53	96/2012	61/1920	74/1941	39/1989
6	82	52	96/2012	60/1920	68/1963*	38/2002
7	82	52	94/2007	64/1920	69/1914	31/2000
8	81	51	93/1956*	62/1920	75/1913	33/1918
9	81	51	92/1991*	65/1919	72/1914	32/1945*
10	80	51	91/1955*	62/1920	70/1914	33/1918
11	80	50	94/1921	58/1985	63/2005*	33/1945
12	79	50	95/1983	56/1985	62/2015*	30/1918
13	79	49	89/1969	57/1985	62/1953	33/1945
14	78	49	91/2008	62/1985	65/2004*	30/1911
15	77	48	90/1995	61/1964	69/1963*	30/1916
16	77	48	90/1932	57/1958	63/1934	30/1916
17	76	47	93/1932	56/1964	63/1999	31/1916
18	76	47	93/1932	60/1958	73/1932	31/1928
19	75	47	87/1936	54/1921	70/1932	32/1928
20	75	46	90/2002	57/1985	61/1968	32/1985*
21	74	46	86/1936*	57/1993	59/1966*	32/1948
22	73	45	87/1950	55/1931	59/1932	33/1979
23	73	45	86/1950	48/1931	60/1919	32/1931
24	72	44	86/1933*	55/2003	64/1946	32/1956*
25	72	44	85/1933	59/1927	60/1914	27/1927
26	71	43	87/1954	58/1920	67/1970	30/1921
27	71	43	93/1922	45/1919	66/1932	24/1921
28	70	43	84/1949	59/2001*	66/1932	30/1994*
29	70	42	85/2008	55/1919	63/1914	28/1948*
30	69	42	86/2008	49/1919	59/2008*	27/1911

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

December

Period of Record: 1911-2015

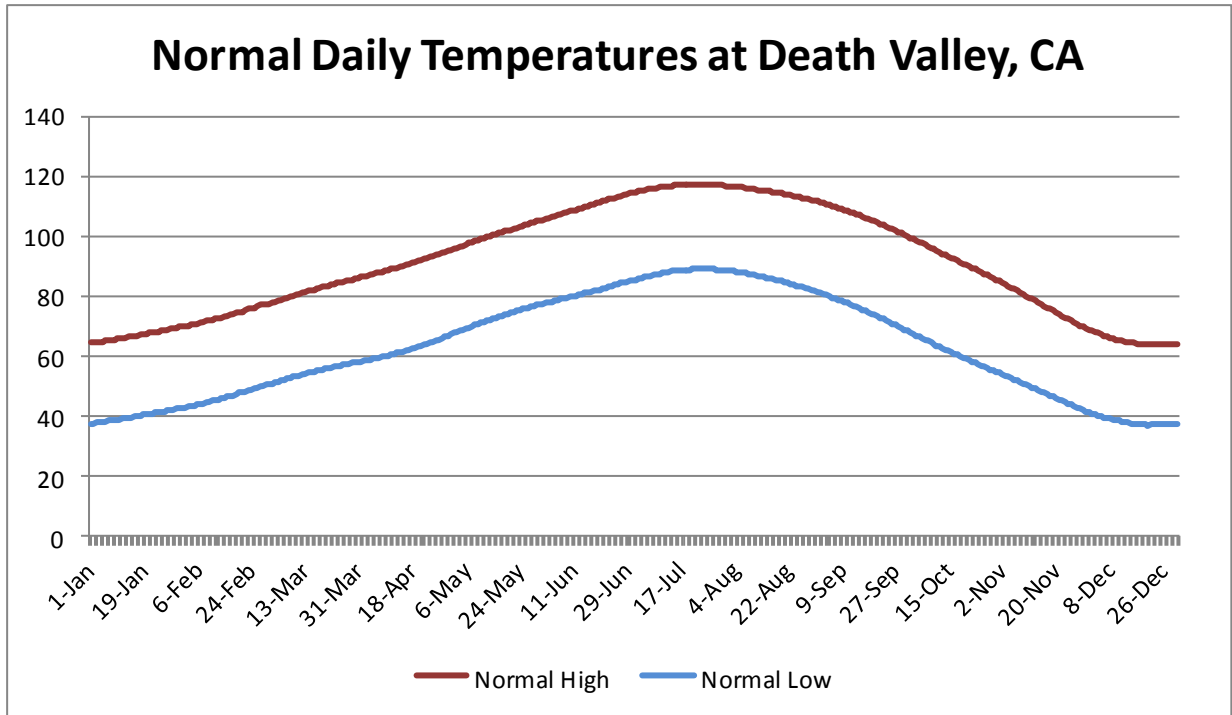
Normals: 1981-2010

Date	Normal High	Normal Low	Record High Maximum	Record Low Maximum	Record High Minimum	Record Low Minimum
1	69	42	84/1949	59/2001	61/1914	23/1911
2	69	41	82/2012*	59/2014*	60/1932	30/1928*
3	68	41	89/1949	50/1984	65/1966	26/1945
4	68	40	86/1949	52/1945	66/1980	26/1945*
5	67	40	85/1949*	54/1919	62/1925*	30/1968*
6	67	40	86/1927	50/1997	64/1966	28/1948
7	67	40	83/1925	50/1992	54/1926	29/2013*
8	66	39	78/1995*	49/1978	57/1988*	28/1999
9	66	39	80/1912	49/1978	55/1914	26/1919*
10	66	39	80/1911	45/1972	56/1970*	26/1994*
11	65	39	81/1914	47/1932	58/1914	26/1994*
12	65	38	83/1995	46/1972	60/1914	23/1972
13	65	38	79/1958*	50/1932*	63/1933	25/1949*
14	65	38	82/1942	47/1967	60/1937	23/1945
15	65	38	84/1998	46/1987	61/1959	23/1919
16	64	38	88/1998	50/1987	66/1998	22/1919
17	64	38	86/1998	50/1940*	60/1998	23/1945
18	64	37	81/1922	43/1984	58/1914	22/1927
19	64	37	79/1999	47/1984	56/1914	23/1927
20	64	37	81/1999	51/1990	65/1999	23/1927
21	64	37	79/1922*	41/1990	60/1914	23/1927
22	64	37	82/1914	39/1990	70/1914	22/1990
23	64	37	84/1955	38/1990	70/1914	23/1990*
24	64	37	78/1914	42/1990	62/1914	22/1912
25	64	37	81/1942	50/1920	61/1914	22/1990*
26	64	37	79/2005	50/1920	64/1914	20/1924
27	64	37	78/1967	50/1984*	63/1914	19/1924
28	64	37	79/1975	48/1916	60/1914	21/1918
29	64	37	77/1951	45/1915	65/1914	21/1912
30	64	38	75/1989*	43/1915	59/1951	21/1912
31	64	38	77/1929	48/1990*	59/1914	22/1990*

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.



Normal daily maximum and minimum temperatures at Death Valley, California based on 1981-2010 normals.

Monthly and Annual Average Temperatures

Listed below are the normal average temperatures by month and then year based on the period from 1981 through 2010 and the ten warmest and ten coldest for each based on average temperature. Monthly averages for the warmest and coldest were listed only for months where 5 days or less of missing data existed.

January

Normal Average Temperature: 53.4	
Warmest Januaries	Coldest Januaries
1. 58.7 / 2003	1. 40.6 / 1937
2. 57.9 / 1980	2. 43.0 / 1919
3. 57.0 / 2014	3. 43.9 / 1949
4. 56.9 / 1981	4. 45.7 / 1913
5. 56.8 / 2015	5. 46.3 / 1929
5. 56.8 / 1934	6. 46.5 / 1950
7. 56.3 / 2005	6. 46.5 / 1917
7. 56.3 / 1959	8. 48.4 / 1991
9. 56.0 / 1953	8. 48.4 / 1921
10. 55.9 / 1938	10. 48.5 / 1963

February

Normal Average Temperature: 59.8	
Warmest Februaries	Coldest Februaries
1. 66.9 / 2015	1. 50.9 / 1919
2. 66.5 / 1963	2. 51.9 / 1933
3. 64.4 / 1995	3. 52.1 / 1929
4. 64.2 / 1957	4. 53.3 / 1949
5. 63.6 / 1954	5. 53.4 / 1939
6. 63.5 / 1968	6. 53.8 / 1956*
7. 63.2 / 1930	7. 53.9 / 1928*
8. 63.1 / 2014	8. 54.4 / 1998
8. 63.1 / 1977	8. 54.4 / 1955
10. 62.7 / 1996	10. 54.6 / 2001
10. 62.7 / 1991	
10. 62.7 / 1934	

March

Normal Average Temperature: 68.4	
Warmest Marches	Coldest Marches
1. 75.3 / 1957*	1. 58.3 / 1919
2. 75.1 / 2004	2. 60.4 / 1952
3. 75.0 / 2015	3. 60.7 / 1924
3. 75.0 / 1972	4. 60.8 / 1920
5. 74.9 / 1934	5. 61.3 / 1917
6. 73.6 / 2007	6. 61.5 / 1945
7. 73.5 / 1914	7. 62.2 / 1927
8. 73.2 / 2013	8. 62.3 / 1991
9. 72.8 / 1994	9. 62.9 / 1922
10. 72.5 / 1916	10. 63.2 / 1913

* Contains 1-5 days of missing data.

April

Normal Average Temperature: 76.3	
Warmest Aprils	Coldest Aprils
1. 83.4 / 1989	1. 65.8 / 1967*
2. 82.4 / 1934	2. 67.8 / 1921
3. 82.2 / 1962	3. 68.1 / 1929*
4. 81.8 / 1946	4. 69.4 / 1983
5. 81.5 / 1959	5. 69.7 / 1998
6. 81.3 / 2013	6. 70.1 / 1975
6. 81.3 / 1954	7. 70.2 / 1941
8. 81.0 / 1916	8. 70.4 / 1999*
9. 80.6 / 2014	9. 71.3 / 1920
9. 80.6 / 1949	10. 71.4 / 1922

* Contains 1-5 days of missing data.

May

Normal Average Temperature: 86.6	
Warmest Mays	Coldest Mays
1. 92.7 / 2001*	1. 72.3 / 1921*
2. 92.4 / 2009	2. 76.4 / 1998
3. 91.0 / 1997	3. 77.7 / 1977
4. 90.9 / 2006	4. 78.1 / 1933
4. 90.9 / 1954	5. 78.7 / 1917
4. 90.9 / 1947	6. 78.8 / 1953
7. 90.8 / 1992	7. 79.2 / 1918
8. 90.5 / 2012	8. 79.5 / 1957
9. 90.4 / 2007	9. 79.6 / 1930
10. 90.2 / 1984	10. 80.0 / 1991

* Contains 1-5 days of missing data.

June

Normal Average Temperature: 95.5	
Warmest Junes	Coldest Junes
1. 101.3 / 2013	1. 86.0 / 1923
2. 100.4 / 1960	2. 87.0 / 1944
3. 100.3 / 2015	3. 87.8 / 1998
4. 100.1 / 1961	4. 87.9 / 1928
5. 100.0 / 2006	5. 89.5 / 1945
6. 99.5 / 1959	6. 89.6 / 1952
7. 99.4 / 1981	7. 90.1 / 1995
8. 99.3 / 2002	7. 90.1 / 1943
9. 99.1 / 1994	9. 90.3 / 1912
9. 99.1 / 1940	10. 90.6 / 1991

July

Normal Average Temperature: 102.2	
Warmest Julys	Coldest Julys
1. 107.2 / 1917	1. 95.2 / 1912
2. 106.9 / 2006	2. 96.4 / 1987
3. 106.7 / 2005	3. 97.2 / 1983
3. 106.7 / 1929	4. 97.3 / 1982
5. 106.3 / 2002	5. 97.5 / 1997
5. 106.3 / 1959	5. 97.5 / 1986
7. 106.1 / 2007	7. 97.6 / 1944
8. 105.7 / 2010	8. 97.8 / 1992
9. 105.5 / 2003	9. 97.9 / 1928*
10. 105.4 / 1915*	10. 98.2 / 1918

* Contains 1-5 days of missing data.

August

Normal Average Temperature: 100.2	
Warmest Augusts	Coldest Augusts
1. 106.2 / 1915*	1. 94.4 / 1976
2. 105.7 / 1929	2. 94.5 / 1983
3. 104.5 / 1971	3. 94.6 / 1941
4. 104.3 / 2008	4. 94.7 / 1945*
5. 104.2 / 2012	5. 94.9 / 1928
6. 103.5 / 2001	6. 95.2 / 1979
7. 103.4 / 1969	7. 95.4 / 1918
8. 103.2 / 2007	8. 95.9 / 1925
8. 103.2 / 1970	9. 96.1 / 1968
10. 103.1 / 1967	10. 96.1 / 1912

* Contains 1-5 days of missing data.

September

Normal Average Temperature: 91.0	
Warmest Septembers	Coldest Septembers
1. 96.3 / 2012	1. 83.1 / 1912
2. 95.7 / 1915	2. 83.3 / 1921
3. 95.4 / 1974	3. 84.2 / 1985
4. 94.8 / 2003	3. 84.2 / 1918
5. 94.7 / 1935	5. 85.0 / 1920
6. 94.4 / 2009	6. 85.3 / 1986
7. 94.3 / 2011	6. 85.3 / 1941
8. 94.2 / 2014	8. 85.4 / 1965
8. 94.2 / 1979	9. 86.0 / 1928
10. 93.9 / 2013	10. 86.6 / 1982
10. 93.9 / 2008	
10. 93.9 / 1969	

October

Normal Average Temperature: 77.1	
Warmest Octobers	Coldest Octobers
1. 82.8 / 1988	1. 66.2 / 1924*
2. 82.7 / 1964	2. 68.4 / 1919
3. 82.6 / 2003	3. 68.6 / 1920
4. 82.5 / 1913	4. 69.5 / 1916
5. 81.9 / 1933	5. 70.0 / 1928
5. 81.9 / 1914	6. 71.1 / 1921
7. 81.7 / 2014	7. 71.3 / 1984*
8. 81.5 / 1978	8. 71.8 / 1912
9. 81.3 / 1963	9. 71.9 / 1918
9. 81.3 / 1958	10. 72.1 / 1941

* Contains 1-5 days of missing data.

November

Normal Average Temperature: 62.6	
Warmest Novembers	Coldest Novembers
1. 72.6 / 1914	1. 54.4 / 1918
2. 67.7 / 2008	2. 54.5 / 1920
3. 66.6 / 2007	3. 54.6 / 1919
3. 66.6 / 1932	4. 54.8 / 1916
5. 66.1 / 1950	5. 55.9 / 1994
6. 66.0 / 1995	6. 57.0 / 1938
7. 65.8 / 1986*	7. 57.3 / 2000
8. 65.6 / 1968	8. 57.8 / 1928
9. 65.4 / 2001	9. 57.9 / 1990
10. 65.2 / 2012	10. 58.0 / 1985
10. 65.2 / 1981	
10. 65.2 / 1967	

* Contains 1-5 days of missing data.

December

Normal Average Temperature: 51.7	
Warmest Decembers	Coldest Decembers
1. 66.2 / 1914	1. 43.4 / 1990
2. 57.4 / 1937	2. 44.9 / 1918
3. 57.1 / 1925	3. 45.6 / 1919
4. 56.3 / 1950	4. 46.4 / 1945
5. 56.2 / 2014	4. 46.4 / 1920
5. 56.2 / 1980	6. 46.6 / 1916
5. 56.2 / 1977	7. 46.8 / 1928
8. 56.1 / 1946	8. 47.6 / 1927*
9. 56.0 / 2012	9. 47.9 / 1968
9. 56.0 / 1975	9. 47.9 / 1931

Warmest and Coldest Months Overall

Warmest Months	Coldest Months
1. 107.2 / July 1917	1. 40.6 / January 1937
2. 106.9 / July 2006	2. 43.0 / January 1919
3. 106.7 / July 2005	3. 43.4 / December 1990
3. 106.7 / July 1929	4. 43.9 / January 1949
5. 106.3 / July 2002	5. 44.9 / December 1918
5. 106.3 / July 1959	6. 45.6 / December 1919
7. 106.2 / August 1915*	7. 45.7 / January 1913
8. 106.1 / July 2007	8. 46.4 / December 1945
9. 105.7 / July 2010	8. 46.4 / December 1920
9. 105.7 / August 1929	10. 46.5 / January 1950
	10. 46.5 / January 1917

* Contains 1-5 days of missing data.

Annual

Normal Average Temperature: 77.2	
Warmest Years	Coldest Years
1. 79.9 / 2014	1. 71.9 / 1919
2. 79.7 / 2012	2. 72.1 / 1920*
3. 79.3 / 2007	3. 72.7 / 1918*
4. 79.1 / 2013	4. 73.0 / 1945*
5. 78.9 / 2015	5. 73.1 / 1912
5. 78.9 / 1959*	6. 73.5 / 1998*
7. 78.8 / 2008	7. 74.3 / 1944
8. 78.6 / 1960*	7. 74.3 / 1923*
9. 78.4 / 1981	10. 74.5 / 1982*
10. 78.2 / 2006	10. 74.5 / 1941*
10. 78.2 / 2003*	

* Contains at least one month that had 5 days or less of missing data.

Average Monthly and Annual Temperatures at Death Valley

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
1911	-	-	-	-	-	-	100.3	97.4	87.7	73.1	59.7	51.6	-
1912	52.8	60.0	65.5	71.6	82.4	90.3	95.2	96.1	83.1	71.8	59.2	48.9	73.1
1913	45.7	57.3	63.2	77.1	84.7	92.3	98.6	100.5	92.8	82.5	M	M	M
1914	M	M	73.5	75.4*	86.1	91.5	101.2*	100.0*	M	81.9	72.6	66.2	M
1915	M	61.8	69.8	78.1	80.2	98.1*	105.4*	106.2*	95.7	76.1	60.3	M	M
1916	M	58.2	72.5	81.0	84.5	M	102.6*	98.0	90.1	69.5	54.8	46.6	M
1917	46.5	58.3	61.3	73.7	78.7	96.3	107.2	100.7	89.4	77.5	59.8	51.4	75.1
1918	51.2	54.8	64.7	73.8*	79.2	98.4	98.2	95.4	84.2	71.9	54.4	44.9	72.7
1919	43.0	50.9	58.3	71.9	85.1	92.8	101.7	99.9	89.2	68.4	54.6	45.6	71.9
1920	51.2	54.9	60.8	71.3	83.7	91.8	100.6	97.9*	85.0	68.6	54.5	46.4	72.1**
1921	48.4	56.8	64.6*	67.8	72.3*	91.8*	M	M	83.3	71.1	60.4	M	M
1922	45.9*	56.4*	62.9	71.4	85.1	M	M	99.6	93.5*	75.9	60.5*	55.6*	M
1923	53.4*	57.3*	65.8*	74.2*	85.0	86.0	98.7*	95.1*	88.9*	73.7	62.5	51.9	74.3**
1924	48.8*	61.7*	60.7	75.4*	89.1	97.4	102.8*	M	88.4*	66.2*	58.8	48.7	M
1925	51.0	61.0*	66.8	75.7	87.1*	91.3*	99.8*	95.9	86.8*	73.5	59.7*	57.1	75.2**
1926	54.2*	60.2	71.4*	78.2	88.8*	97.3	M	96.7	88.3*	76.6*	63.5	53.6*	M
1927	52.4*	58.7	62.2	71.3*	81.9*	96.1	105.1*	100.4	89.5	73.8	60.8	47.6*	75.0**
1928	M	53.9*	67.4	75.1	82.5	87.9	97.9*	94.9	86.0	70.0	57.8	46.8	M
1929	46.3	52.1	64.4	68.1*	82.9*	92.3	106.7	105.7	M	80.1*	62.0*	55.5	M
1930	50.0*	63.2	68.3	79.4*	79.6	M	M	97.8	88.6	76.7	61.8	M	M
1931	54.7*	M	M	77.8	88.3	92.2	102.5	M	87.7	M	58.4	47.9	M
1932	48.8	55.1	66.0*	76.3*	83.2*	M	100.0	97.9	92.7*	77.2	66.6	50.7	M
1933	49.2	51.9	M	72.9	78.1	M	M	100.5	91.3	81.9	63.7	52.5	M
1934	56.8	62.7	74.9	82.4	89.2	91.0	M	M	91.2	77.2	64.2	55.0	M
1935	52.7	60.0	63.3	76.0	83.8*	98.9*	99.3	M	94.7	75.8	58.8	53.8	M
1936	53.1	58.5	71.0	80.2	85.7	96.4*	101.2*	M	89.3	75.8	M	51.6	M
1937	40.6	55.3	65.4	72.9	88.4	94.7	102.1*	102.6	93.4	78.1	63.0	57.4	76.2**
1938	55.9	58.4	64.3	76.3	83.7	94.7	M	98.6	92.0	74.9	57.0	55.5	M
1939	53.1	53.4	67.1	78.5	86.6	93.5	M	M	87.5	75.0	62.6	54.8	M
1940	54.4	59.2	70.4	76.6	88.4	99.1	100.0	101.0	88.3	76.1	59.4	52.4	77.2
1941	53.6	58.9	65.7	70.2	86.3	91.5	100.2*	94.6	85.3	72.1	62.0	53.3	74.5**
1942	53.2	57.2	65.4	75.9	81.8	94.6	104.9*	99.3	88.4	77.5	61.2	54.7	76.2**
1943	54.3	60.4	69.2	79.2	87.0	90.1	101.0	99.0	91.2	M	61.4	55.5	M
1944	52.6	57.3	66.0	72.7	83.7	87.0	97.6	96.4	89.2	76.7	61.0	51.2	74.3
1945	50.9	56.8	61.5	71.7	81.2	89.5	101.2	94.7*	89.0	74.0	58.9	46.4	73.0**
1946	50.8	55.5	66.6	81.8	86.1	M	98.6*	99.4	91.8	76.2	M	56.1	M
1947	52.6	62.1*	71.3	80.2	90.9	M	100.6	98.0	93.2	77.2	60.4	52.8	M
1948	52.8	56.7	M	75.1	83.4	91.9	99.4	97.9	88.8	75.5	58.2	50.5	M
1949	43.9	53.3	65.3	80.6	83.5	95.6*	M	97.1	M	73.9	64.9	50.1	M
1950	46.5	61.3	66.4	78.6	83.9	90.7	100.8	98.4	88.8	79.8	66.1	56.3	76.6
1951	52.5	57.7	66.5	77.2	86.5	95.6	102.9	99.3	93.2	76.6	62.0	52.2	77.0*
1952	50.5	58.5	60.4	75.4	86.6	89.6	100.9	102.3*	92.2	81.1	59.3	52.8	75.8**
1953	56.0	58.3	68.2	77.3	78.8	92.1	104.6	98.8	91.9	77.6	65.1	53.1	76.9
1954	52.1	63.6	64.4	81.3	90.9	93.1	103.0	96.6	90.8	77.3	64.4	50.9	77.4
1955	49.0*	54.4	67.5*	72.4	82.2	93.6	99.4	101.6	91.1*	78.3	M	54.4*	M
1956	54.7	53.8*	67.9*	74.5*	M	96.0	99.4	97.1	92.3	76.5	61.7	52.2	M
1957	50.3	64.2	75.3*	78.7	79.5	96.9	100.3	99.0*	M	M	M	M	M
1958	M	M	64.4	75.2	89.4*	94.8	101.0	102.9	93.7	81.3	62.0	54.2	M
1959	56.3	58.7	71.5	81.5	84.4*	99.5	106.3	99.9	89.2	79.9	62.7*	54.1	78.9**

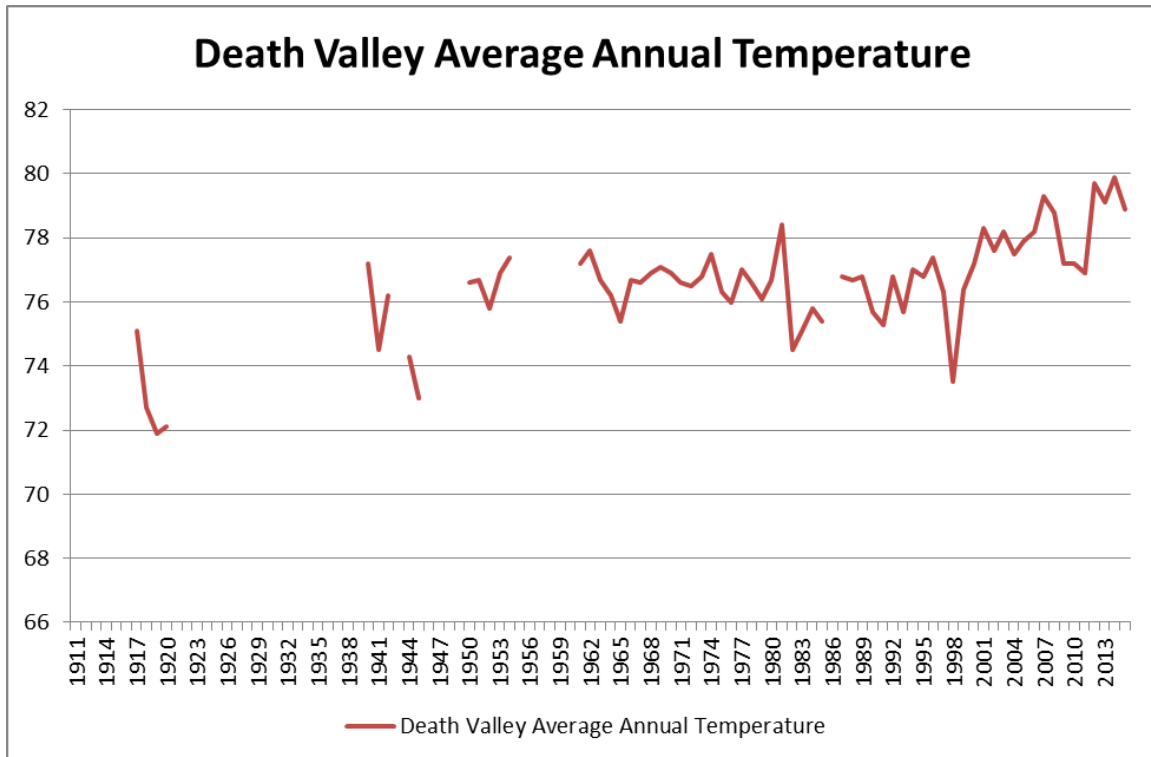
1960	50.4	57.7	72.4	80.3	86.0	100.4	104.5	101.2*	93.6	77.7	M	53.3	M
1961	51.5	61.4	68.6	79.6*	84.7	100.1	104.7	100.3	88.4	76.1	59.7	50.4	77.2**
1962	53.9	59.3	63.6	82.2	83.6	95.7	100.7	100.4	93.0	79.9	64.9	52.6	77.6
1963	48.5	66.5	66.3	72.5	87.8	91.0	101.2	98.8	90.8	81.3	63.4	51.3	76.7
1964	50.8	58.2	64.9	75.1	83.9	93.2	102.0	100.0*	90.7	82.7	58.9	54.7	76.2**
1965	55.6	61.1	66.7	72.6	83.3	90.7	98.5	98.2	85.4	78.6	62.7	49.0*	75.4**
1966	49.1	54.8*	66.8	78.8	88.5	95.0	100.0	100.6	90.8*	76.2*	63.5	53.9*	76.7**
1967	53.1	61.7	70.3*	65.8*	84.6	90.7	103.1	103.1	91.3	78.2	65.2	50.0	76.6
1968	51.4	63.5	68.7	74.9	85.7	97.1	101.1	96.1	91.8	78.3	65.6	47.9	76.9
1969	54.9	55.8	64.5	77.0	88.7	92.3	101.8	103.4	93.9	73.9	63.7	52.8*	77.1**
1970	52.2	61.4	67.1	71.6	87.3	95.9	103.3	103.2	89.2	75.2	63.3	52.0	76.9
1971	52.7	60.6	66.9	75.0	81.9	94.4	103.8	104.5	91.2	74.0	61.1	51.6	76.6
1972	49.9	59.2	75.0	76.5	86.6	95.4	103.7	98.6	88.7	74.6	59.8	49.3	76.5
1973	50.0	60.1*	63.4	75.0	89.5	97.8	102.9	100.1	89.6	77.0	60.9	53.6	76.8**
1974	50.7	59.0	69.6	75.7	88.4	98.5	101.3	97.9	95.4	78.5	62.1	52.1	77.5
1975	51.7	60.0	66.0	70.1	84.9	95.7	101.1	97.9	92.4	76.7	61.5	56.0	76.3
1976	54.7	60.5	65.9	74.0	88.2	94.0	101.0	94.4	88.4	77.3	64.2	48.9	76.0
1977	52.5	63.1	64.0	80.0	77.7	98.7	102.0	99.0	89.1	79.0	62.3	56.2	77.0
1978	55.3	60.1	69.5	72.3*	83.0	96.1	101.0	99.8	88.3	81.5	62.5	48.5	76.6**
1979	50.5	56.3	67.4	75.4*	86.7	93.5	99.8	95.2	94.2	79.1	60.4	53.2	76.1**
1980	57.9	62.2*	65.0	75.5	80.5	91.7	101.6	99.2	90.0	78.0	61.9	56.2	76.7**
1981	56.9	61.6	67.8	80.1	86.5	99.4	102.3	100.3	92.7	74.2	65.2	53.6	78.4
1982	51.8	59.1	64.2	74.8	86.0	91.6	97.3	97.6	86.6	72.6	58.3	51.2*	74.5**
1983	52.2	58.6	65.2	69.4	83.6	93.0	97.2	94.5	92.0	77.6	63.9	52.7	75.1
1984	55.7	59.1	67.9	73.5	90.2	93.2	99.3	96.6	91.8	71.3*	59.5*	49.0	75.8**
1985	51.1	56.7	64.9	78.7*	85.7	97.4	102.3	97.5	84.2	75.0	58.0	52.0	75.4**
1986	55.7	61.7*	72.3	76.5	86.7*	97.2*	97.5	101.9	85.3	M	65.8*	52.9	M
1987	52.0	62.4*	65.8	79.4	85.2	95.4	96.4	99.5	91.8	80.4	63.2	48.9	76.8**
1988	49.9	61.0	68.9	74.0	83.2*	93.0	103.3	98.8	89.4	82.8	63.4	52.3	76.7**
1989	50.9	57.9	71.0	83.4	85.3	95.6*	102.7	97.2	88.5	75.2	62.9	51.2	76.8**
1990	51.7	57.4	69.9	79.3	84.4	95.8	102.1	98.2	92.0	75.0	57.9	43.4	75.7
1991	48.4	62.7	62.3	73.6	80.0	90.6	99.5*	98.3	92.6	81.2	62.5	52.4	75.3**
1992	50.6	61.0	67.0	80.5	90.8	93.7	97.8	100.5	91.0	79.7	60.1	48.5	76.8
1993	49.3	57.0	68.6	77.7	87.1	91.3	99.1	98.5	89.7	77.6	59.0	51.5	75.7
1994	53.0	55.9	72.8	77.4	85.4	99.1	104.3	102.5	90.4	74.9	55.9	51.0	77.0
1995	52.9	64.4	67.1	73.4	80.2	90.1	100.9	101.5	92.9	77.0	66.0	54.2	76.8
1996	54.8	62.7	69.0	78.8	86.9	97.2	104.2	100.3	88.8	73.8	60.8	51.4	77.4
1997	54.3	59.9	69.6	75.2	91.0	93.0	97.5	99.8	89.8	73.4	60.5	49.7*	76.3**
1998	51.7	54.4	63.8	69.7	76.4	87.8	101.1	100.2	88.3	72.5	60.7	53.2*	73.5**
1999	54.9	59.3	68.5	70.4*	85.1	94.3	99.1	98.7	90.8	77.8	62.5	54.0	76.4**
2000	54.5	61.4	68.5*	80.1	89.0	98.4	101.1	99.5	88.8*	75.6*	57.3	51.8	77.2**
2001	50.1	54.6	69.8*	75.3*	92.7*	98.8	100.5	103.5	93.7	79.6	65.4	52.4*	78.3**
2002	52.2	59.2	65.7	78.3	86.3	99.3	106.3	98.6	91.5	75.2	64.3	53.2	77.6
2003	58.7	58.9	68.7*	72.5	86.8	98.2	105.5	101.4	94.8	82.6	58.3	49.6	78.2**
2004	52.1	57.1	75.1	78.5	87.4	97.0	102.6	99.8*	90.1	76.0	61.4	54.1	77.5**
2005	56.3	60.6	68.1	74.7	88.3	94.2	106.7	101.3	88.1	77.8	65.0	52.1	77.9
2006	55.4	61.7	64.2	75.3	90.9	100.0	106.9	100.2	91.0	75.7	64.4	51.3	78.2
2007	52.5	61.4	73.6	79.6	90.4	98.8	106.1	103.2	91.0	76.8	66.6	50.5	79.3
2008	53.2	59.8	69.4	77.7	85.8	98.0	105.2	104.3	93.9	77.7	67.7	52.3	78.8
2009	56.9	57.4	67.1	75.7	92.4	91.7	105.2	98.2	94.4	73.6	61.6	49.8	77.2
2010	51.6	59.7	67.4	73.3	82.2	97.8	105.7	100.2	91.6	79.0	62.7	54.1	77.2
2011	52.0	57.6	68.4	76.1	82.4	95.4	101.3	101.9	94.3	79.2	60.2	52.4	76.9
2012	54.1	62.1	67.9	78.8	90.5	98.5	102.7	104.2	96.3	79.3	65.2	56.0	79.7

2013	53.1	60.9	73.2	81.3	88.6	101.3	105.2	101.4	93.9	74.5	62.8	51.7	79.1
2014	57.0	63.1	72.0	80.6	88.0	98.2	104.0	96.6	94.2	81.7	64.1	56.2	79.9
2015	56.8	66.9	75.0	78.2	85.2	100.3	99.0	102.4	93.6	79.5	60.3	49.5	78.9

* Contains 1-5 days of missing data.

**Average based on months that have 1-5 days of missing data.

M = a month missing more than 5 days of data or a year with at least one month of missing data.



Average Annual Temperature for Death Valley, California from 1911-2015. Red line is the average annual temperature. Blank areas of the red line indicate missing data.

Average Maximum Temperatures at Death Valley By Month and Year

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
1911	-	-	-	-	-	-	117.0	115.8	105.2	91.1	78.2	68.9	-
1912	72.7	80.6	81.5	88.7	100.0	109.5	110.7	111.4	100.9	88.4	79.3	67.7	91.0
1913	64.8	72.7	81.4	96.2	103.2	110.0	116.5	116.7	107.7	94.8	78.5	65.7	92.5
1914	69.0	75.1	86.3	88.5	100.6	106.9	116.6	116.3	M	91.5	81.5	72.9	M
1915	69.8	69.0	82.6	91.4	95.2	110.7	114.6	118.2	104.9	90.6	71.3	58.5	89.9
1916	56.5	70.4	85.5	92.1	100.2	111.6	118.4*	112.7	108.3	84.1	70.4	60.5	89.2**
1917	59.3	72.0	76.6	90.6	93.7	113.2	121.9	118.6	105.1	93.8	74.8	66.5	90.6
1918	65.8	68.1	76.0	88.0*	92.2	112.2	110.1	109.1	100.1	84.9	67.7	56.6	86.0**
1919	57.8	65.6	73.8	88.2	100.8	111.0	116.2	113.3	102.0	81.3	68.3	58.7	86.5
1920	62.7	65.5	71.7	84.1	98.6	104.5	114.9	111.1*	97.7	79.4	65.7	59.1	84.6**
1921	59.4	72.0	81.1*	82.6	86.3	108.1	116.1*	110.6*	104.3	91.7	76.9	69.3	87.8**
1922	62.6	68.1*	76.2	83.8	101.3	111.3*	118.9	113.5	110.4*	90.2	75.2	69.3*	90.3**
1923	67.5	72.0*	80.8*	88.0	101.2	104.0	114.5*	111.9	104.8	89.7	75.9	65.5	89.7**
1924	64.1	77.3	74.9	90.2	104.8	115.6	116.9*	115.7	109.8*	89.2*	74.8	62.7	91.3**
1925	66.2	76.4*	83.1	90.5	102.1	106.5*	116.4*	110.9	102.5*	89.8	73.8	72.1	90.8**
1926	68.5	75.0	87.3	90.3	102.4*	113.6	116.8*	113.5	105.3*	92.5*	78.3	66.0*	92.2**
1927	68.0*	71.7	73.8	86.7	95.3	109.7	118.1*	114.0	105.9	95.8	77.5	62.7*	90.1**
1928	M	72.4	87.7	96.7	105.3	109.9	118.3*	115.2	108.2	94.5	79.1	66.8	M
1929	M	71.5	84.7	88.2*	101.9*	111.0	119.5	116.5	105.8	96.1	78.7	71.5	M
1930	62.7*	79.8	83.1	93.6	93.8	112.2*	116.0	112.9	103.1	94.5	79.7	66.8	91.7**
1931	70.5*	M	86.6*	93.0	103.4	107.8	120.6	112.3	102.9	92.0	73.2	62.3	M
1932	62.1	70.0	84.3	90.9	98.3	107.0	114.5	113.5	110.4*	93.4	82.4	63.9	90.9**
1933	62.7	67.0	M	90.6	94.2	108.7	119.9	115.7	108.5	98.6	80.9	65.4	M
1934	71.6	77.9	91.6	99.0	104.4	105.0	116.9	115.1	105.9	92.5	77.5	69.5	94.0
1935	66.1	72.8	77.7	89.9	96.9	111.9	111.0	M	109.6	91.6	74.4	68.4	M
1936	69.2	73.9	85.4	95.1	100.5	111.0	115.6	115.3	103.5	89.8	M	65.0	M
1937	50.1	69.0	78.9	88.0	102.8	108.1	115.7	116.9	108.4	93.4	78.2	70.1	90.1
1938	70.3	70.4	77.3	90.1	97.7	107.1	M	112.7	106.2	89.1	71.8	66.7	M
1939	66.4	65.5	80.4	92.2	99.6	108.2	115.2	114.4	100.7	89.4	77.2	68.6	90.0
1940	67.6	71.4	84.4	89.4	103.7	113.5	114.7	115.3	102.0	92.3	73.7	64.7	91.1
1941	66.2	70.8	79.5	82.1	98.8	104.8	114.1	107.4	99.6	84.5	75.4	64.0	87.4
1942	66.4	68.7	79.2	88.3	95.1	108.0	118.0	113.2	104.4	93.0	77.7	71.9	90.4
1943	70.6	78.7	84.2	93.6	100.4	103.2	115.5	112.8	107.0	M	77.9	68.2	M
1944	67.7	71.6	81.1	87.4	99.1	102.4	113.6	114.0	107.2	94.1	75.2	67.7	90.1
1945	66.8	72.6	77.0	89.4	95.5	105.9	116.5	111.0*	107.4	91.5	77.8	61.9	89.5**
1946	66.6	70.9	82.9	96.5	99.1	109.3	113.8	114.0	107.9	88.9	73.8	69.6	91.2
1947	67.4	77.9	87.0	92.7	105.6	M	114.5	110.1	108.6	91.7	73.8	64.5	M
1948	69.2	70.2	M	91.4	98.2	107.1	113.5	113.0	106.7	93.2	76.6	65.8	M
1949	53.9	66.4	77.8	94.6	96.6	109.7	115.3	111.5	M	90.7	83.5	66.8	M
1950	62.5	78.1	83.9	96.0	99.4	107.4	114.7	113.8	102.6	96.3	81.8	71.4	92.4
1951	66.4	72.0	80.1	90.9	100.2	108.3	116.7	113.0	108.7	91.5	76.5	64.8	90.8
1952	62.1	72.4	72.2	88.7	101.5	104.8	114.9	115.4	107.6	98.8	72.4	65.1	89.7
1953	69.2	73.7	82.8	90.4	91.4	106.1	117.4	112.3	108.3	91.7	78.7	66.8	90.8
1954	66.6	80.3	78.7	96.3	104.3	106.6	116.5	110.1	105.6	92.8	79.3	64.3	91.8
1955	61.2	67.1	81.4	86.4	95.5	107.5	111.9	114.4	107.6*	94.4	76.8	68.4	89.5**
1956	68.4	69.2*	83.2*	88.4*	M	110.2	112.5	111.1	107.8	91.8	78.9	68.8	M
1957	64.6	78.7	87.0*	93.8	92.3	111.1	114.5	112.4*	M	M	M	M	M
1958	M	M	75.6	88.5	103.4*	108.2	114.4	116.4	108.1	96.2	75.3	67.8	M
1959	68.1	70.3	85.4	95.9	97.4	113.1	119.3	113.1	101.9	94.4	77.8*	66.2	92.1**

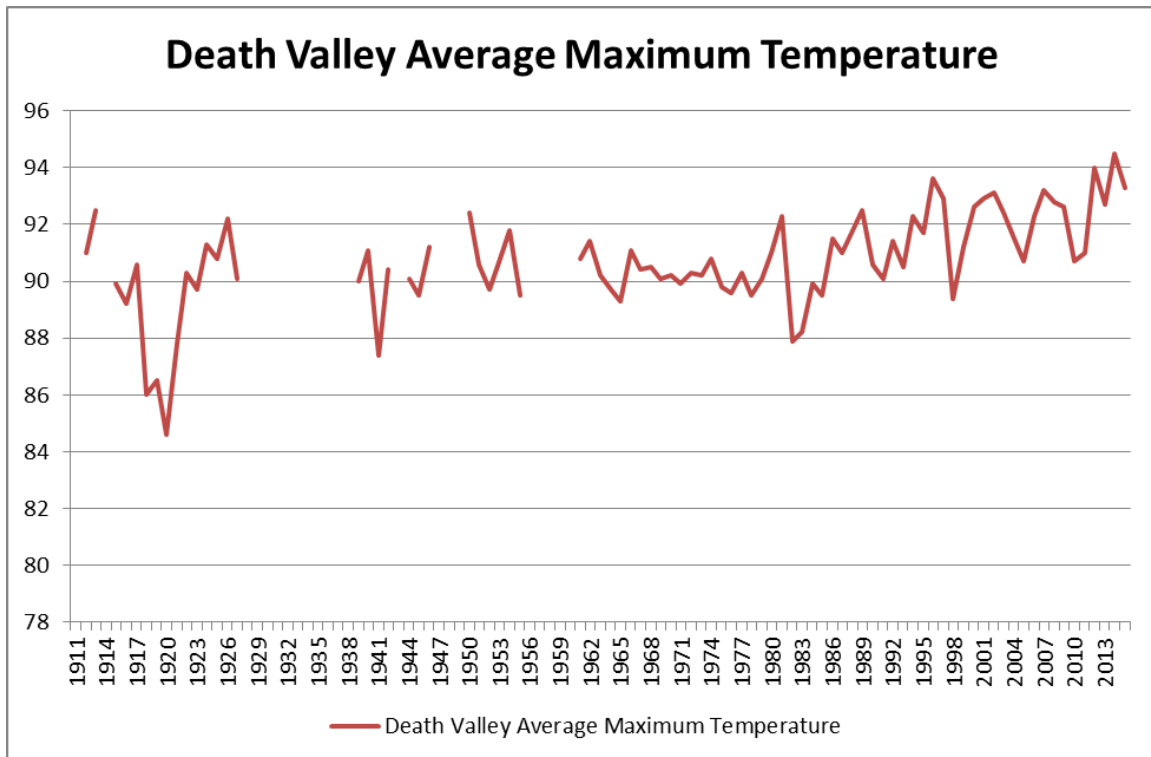
1960	61.3	70.3	86.3	94.3	100.7	114.7	118.1	114.9	108.7	92.0	M	66.1	M
1961	65.5	75.1	82.2	94.3*	97.9	113.7	117.9	112.7	102.7	90.9	72.5	63.3	90.8**
1962	67.4	71.5	76.6	97.8	96.5	109.6	113.8	114.9	108.7	94.1	78.6	66.5	91.4
1963	63.0	79.7	79.7	85.7	100.2	104.4	114.0	111.9	105.7	94.5	76.6	66.2	90.2
1964	64.6	72.3	78.4	88.4	97.0	106.3	115.5	112.8	105.3	97.9	71.1	67.2	89.7
1965	69.1	76.0	79.9	84.1	96.2	104.8	112.1	112.1	100.3	96.4	77.5	61.2*	89.3**
1966	62.9	68.8*	83.6	94.5	102.5	108.5	113.5	114.2	106.1	92.3*	76.2	67.0	91.1**
1967	66.8	76.8	82.4	78.7	98.5	104.9	117.1	117.1	104.8	95.1	79.2	62.4	90.4
1968	66.1	76.6	83.2	88.7	99.7	110.6	113.5	108.3	106.8	92.9	78.7	60.5	90.5
1969	66.7	67.0	77.1	90.3	102.4	105.3	114.8	117.2	108.6	88.2	77.3	65.0	90.1
1970	64.4	74.5	79.5	84.7	101.1	109.8	116.7	116.2	104.8	90.0	76.9	62.8	90.2
1971	65.4	74.8	82.0	88.7	94.9	108.0	116.6	115.7	105.4	89.5	74.8	62.4	89.9
1972	62.8	75.3	90.5	90.8	100.5	108.6	118.3	112.2	102.8	86.3	72.2	62.4	90.3
1973	62.2	71.3	75.0	88.5	103.4	111.7	117.3	113.3	104.9	92.3	74.3	67.3	90.2
1974	60.4	72.6	81.9	89.2	103.2	113.1	114.4	112.6	110.1	92.1	75.4	63.8	90.8
1975	65.3	72.5	78.1	81.7	99.0	108.9	114.6	111.8	107.1	91.3	75.8	70.0	89.8
1976	69.6	72.3	79.0	86.8	101.9	107.2	114.0	107.6	101.4	91.8	78.6	63.8	89.6
1977	65.6	78.8	77.3	93.6	88.8	110.6	115.1	111.6	103.0	94.3	76.2	68.3	90.3
1978	65.4	71.5	81.1	85.0	98.0	109.3	114.9	113.2	102.3	97.3	74.2	60.6	89.5
1979	59.5	68.7	79.7	89.8	100.8	110.2	115.1	109.0	109.9	94.4	74.6	67.6	90.1
1980	70.0	75.8	77.7	89.8	94.1	106.4	116.1	113.3	106.6	94.6	76.5	70.6	91.0
1981	70.5	76.1	80.3	94.9	100.9	112.8	115.9	115.0	106.9	87.6	79.2	66.4	92.3
1982	66.0	72.9	76.3	87.0	99.1	104.7	111.4	110.6	100.3	87.8	72.3	64.3*	87.9**
1983	67.1	70.7	76.9	81.6	98.2	106.3	111.0	106.5	105.5	91.3	76.6	65.5	88.2
1984	70.0	74.2	82.6	87.8	105.2	107.4	113.6	110.4	106.8	85.8*	73.9*	59.2	89.9**
1985	64.8	70.3	78.6	94.2	99.2	111.5	116.2	112.3	98.0	91.1	70.6	66.0	89.5
1986	70.7	76.4	87.0	90.0	101.1*	111.9*	111.5	115.3	99.2	87.6*	81.6*	65.0	91.5**
1987	63.9	74.7*	78.4	95.4	98.7	111.1	111.4	115.0	107.7	96.6	76.4	61.0	91.0
1988	63.4	77.3	83.4	87.9	98.4	107.6	118.3	113.6	105.5	100.8	78.3	66.1	91.8
1989	66.0	72.4	85.7	98.7	100.3	110.6	118.0	112.0	105.4	91.6	80.1	68.3	92.5
1990	66.9	72.4	85.8	94.6	98.6	111.7	116.7	112.9	106.7	91.9	70.8	56.6	90.6
1991	61.3	79.6	74.5	88.4	94.4	105.1	114.5	112.8	107.9	97.8	77.7	66.9	90.1
1992	64.6	73.3	78.7	96.2	105.0	109.0	113.5	116.5	108.0	95.6	74.8	61.0	91.4
1993	61.3	69.3	83.5	92.8	100.8	107.8	113.4	113.7	107.4	93.4	74.0	67.4	90.5
1994	69.0	70.3	88.0	92.4	100.1	115.3	118.7	117.9	106.9	90.6	70.6	66.0	92.3
1995	63.5	80.4	80.2	88.1	94.5	106.0	116.5	115.9	108.7	94.0	82.6	69.1	91.7
1996	71.0	77.3	84.7	94.5	102.2	113.3	120.2	118.2	106.0	91.1	76.6	67.0	93.5
1997	69.4	76.5	88.7	91.1	108.2	108.6	114.2	116.9	106.2	91.1	76.7	64.9*	92.9**
1998	67.6	68.0	78.8	86.0	91.5	103.9	118.0	118.5	104.2	89.6	75.7	67.4*	89.4**
1999	69.5	73.7	82.8	84.3	98.8	108.8	112.5	112.5	106.4	95.6	79.0	69.4	91.2
2000	69.1	74.4	82.0	96.3	105.7	113.9	116.5	115.2	106.1*	91.3	73.1	67.6	92.6**
2001	64.3	67.9	85.1	88.4	108.0	113.3	115.1	118.4	110.8	95.6	79.7	66.1	92.9
2002	67.2	76.9	81.5	93.3	101.4	113.8	120.6	115.3	107.8	91.8	80.2	67.0	93.1
2003	74.7	72.1	83.3*	85.0	101.8	113.0	120.3	114.4	110.5	99.3	70.1	62.4	92.4**
2004	66.7	69.8	90.6	92.2	101.8	112.0	117.4	113.7*	105.2	89.5	73.0	65.7	91.5**
2005	66.4	70.3	80.7	88.5	101.4	107.1	120.2	114.8	102.3	91.2	78.8	65.4	90.7
2006	68.8	76.4	77.0	88.9	105.1	115.0	120.3	115.2	106.6	89.3	79.0	64.5	92.3
2007	66.6	75.0	89.0	94.1	104.4	113.2	119.8	116.5	103.7	91.2	81.4	62.5	93.2
2008	65.0	74.2	84.4	92.4	98.7	113.0	118.4	118.1	109.8	93.5	80.6	65.1	92.8
2009	72.5*	71.2	82.0	90.9	107.5	106.7	121.4	114.8	110.3	89.2	78.6	64.0	92.6**
2010	65.1	71.2	81.1	87.1	95.0	110.8	119.2	114.1	109.3	92.2	76.9	65.6	90.7
2011	66.2	71.3	82.5	89.4	95.6	109.1	115.2	117.0	109.6	94.6	74.0	66.5	91.0
2012	70.1	75.5	83.0	93.8	105.5	112.8	116.3	118.2	111.3	93.7	79.6	68.0	94.0

2013	66.8	75.0	87.1	95.1	101.8	115.5	118.4	114.3	106.8	89.1	75.9	65.6	92.7
2014	72.7	77.6	86.0	94.5	103.1	113.7	119.0	112.6	109.5	98.3	78.8	66.5	94.5
2015	70.2	82.0	90.7	93.5	98.6	115.1	113.1	117.2	109.6	93.5	74.0	62.2	93.3

* Contains 1-5 days of missing data.

**Average based on months that have 1-5 days of missing data.

M = a month missing more than 5 days of data or a year with at least one month of missing data.



Average annual maximum temperatures by year for Death Valley for the period of 1911-2015. Blank areas of the blue line indicate missing data.

Average Minimum Temperatures at Death Valley By Month and Year

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
1911	-	-	-	-	-	-	83.5	78.9	70.3	55.1	41.2	34.3	-
1912	32.9	39.4	49.5	54.6	64.8	71.0	79.6	80.7	65.4	55.3	39.1	30.2	55.3
1913	26.6	41.8	44.9	57.9	66.2	74.6	80.8	84.4	77.8	70.1	M	M	M
1914	M	M	60.6	62.4*	71.6	76.0	85.8*	83.7*	70.9	72.3	63.7	59.4	M
1915	M	54.6	57.0	64.8	65.3	85.6*	96.1*	94.5*	86.4	61.5	49.4	M	M
1916	M	46.0	59.4	69.9	68.8	M	86.8*	83.4	72.0	55.0	39.2	32.7	M
1917	33.6	44.6	45.9	56.8	63.6	79.4	92.6	82.7	73.7	61.3	44.7	36.3	59.7
1918	36.7	41.5	53.5	59.7*	66.2	84.7	86.2	81.6	68.4	58.9	41.1	33.1	59.4**
1919	28.1	36.3	42.7	55.5	69.4	74.7	87.3	86.5	76.3	55.5	41.0	32.4	57.3
1920	39.7	44.3	49.9	58.6	68.7	79.0	86.4	85.0*	72.4	57.8	43.3	33.6	59.7**
1921	37.5	41.5	49.0*	53.1	58.3	75.5*	M	M	62.2	50.4	43.9	M	M
1922	29.8*	44.4	49.6	58.9	68.9*	M	M	85.7	76.4	61.5	45.6*	42.4*	M
1923	39.7*	42.1*	50.4	60.4*	68.7	67.9	82.9*	78.3*	73.4*	57.7	49.0	38.2	59.0**
1924	33.5*	46.5	46.5	60.2*	73.4	79.1	88.5	M	66.3	43.2	42.8	34.7	M
1925	35.7	46.0	50.6	60.9	72.0*	76.2*	83.6*	80.9	71.3	57.3	45.6*	42.0	59.9**
1926	40.0	45.4	55.5*	66.0	75.1	81.0	84.5*	79.8	71.0	60.5*	48.8	41.1*	62.7**
1927	36.9*	45.7	50.7	59.1*	69.7*	82.4	92.8*	86.8	73.2	51.7	44.0	31.8	60.3**
1928	29.8	35.5*	47.1	53.5	59.6	66.0	78.3*	74.7	63.8	45.5	36.6	26.9	51.2**
1929	M	32.8	44.1	48.2	63.9	73.6	93.9	94.9	M	63.9*	45.1	39.5	M
1930	37.4	46.6	53.4	65.7*	65.4	M	M	82.8	74.1	58.9	43.9	M	M
1931	41.3	M	M	62.6	73.2	76.6	84.4	M	72.4	M	43.5	33.5	M
1932	35.5	40.3	48.3*	62.0*	67.9*	M	85.6	82.3	75.1*	60.9	50.8	37.5	M
1933	35.7	36.8	50.0	55.3	62.0	M	M	85.2	74.2	65.1	46.5	39.5	M
1934	41.9	47.5	58.2	65.7	74.1	76.8*	M	M	76.5	61.8	50.9	40.5	M
1935	39.4	47.2	48.9	62.0	71.3*	85.7*	87.6	88.5	79.9	59.9	43.1	39.2	62.7**
1936	37.1	43.1	56.6	65.3	70.8	82.1*	87.5*	M	75.1	61.7	47.1	38.2	M
1937	31.1	41.5	51.9	57.7	74.0	81.3	88.7*	88.4	78.5	62.8	47.8	44.7	62.4**
1938	41.5	46.5	51.3	62.4	69.7	82.3	87.6	84.5	77.7	60.8	42.3	44.3	62.7
1939	39.8	41.4	53.8	64.8	73.6	78.8	M	M	74.2	60.5	48.0	40.9	M
1940	41.1	47.1	56.4	63.8	73.2	84.8	85.4	86.6	74.6	59.9	45.1	40.0	63.2
1941	41.1	47.1	52.0	58.2	73.8	78.2	86.5*	81.8	70.9	59.8	48.6	42.6	61.8**
1942	40.0	45.6	51.7	63.5	68.5	81.3	91.9*	85.5	72.4	61.9	44.8	37.5	62.1**
1943	38.0	42.2	54.3	64.7	73.5	77.0	86.7	85.2	75.4	63.2	45.0	42.8	62.5
1944	37.5	43.1	50.8	58.1	68.3	71.6	81.6	78.8	71.2	59.4	46.9	34.7	58.6
1945	34.9	41.0	46.1	54.0	66.9	73.1	85.8	78.1	70.7	56.4	40.1	30.9	56.6
1946	34.9	40.1	50.4	67.0	73.2	M	83.4*	84.7	75.7	63.5	M	42.6	M
1947	37.8	46.4*	55.5	67.7	76.2	M	86.8	85.9	77.8	62.7	47.0	41.1	M
1948	36.3	43.2	M	58.8	68.6	76.6	85.3	82.7	70.8	57.7	39.8	35.2	M
1949	33.8	40.2	52.8	66.5	70.5	81.9*	M	82.7	M	57.0	46.3	33.5	M
1950	30.6	44.6	48.9	61.2	68.5	74.1	86.9	83.0	74.9	63.4	50.5	41.2	60.7
1951	38.7	43.4	52.8	63.5	72.7	83.0	89.5	85.7	77.8	61.8	47.5	39.6	63.1
1952	38.9	44.7	48.5	62.1	71.6	74.4	86.8	89.2*	76.9	63.4	46.3	40.5	61.9**
1953	42.8	42.8	53.5	64.3	66.3	78.1	91.8	85.4	75.6	63.6	51.5	39.5	63.0
1954	37.5	47.0	50.1	66.3	77.6	79.6	89.5	83.1	75.9	61.8	49.4	37.4	63.0
1955	36.9*	41.6	53.3*	58.3	68.9	79.6	86.9	88.8	74.5	62.1*	M	40.7*	M
1956	40.9	38.4	52.3*	60.6*	M	81.9	86.2	83.1	76.8	61.2	44.5	35.5	M
1957	36.1	49.6	63.4*	63.5	66.7	82.6	86.0	85.1	M	M	M	M	M
1958	M	M	53.2	61.8	75.5*	81.3	87.6	89.4	79.3	66.4	48.7	40.7	M
1959	44.5	47.1	57.7	67.1	71.3*	85.8	93.3	86.7	76.4	65.4	47.6*	42.1	65.6**

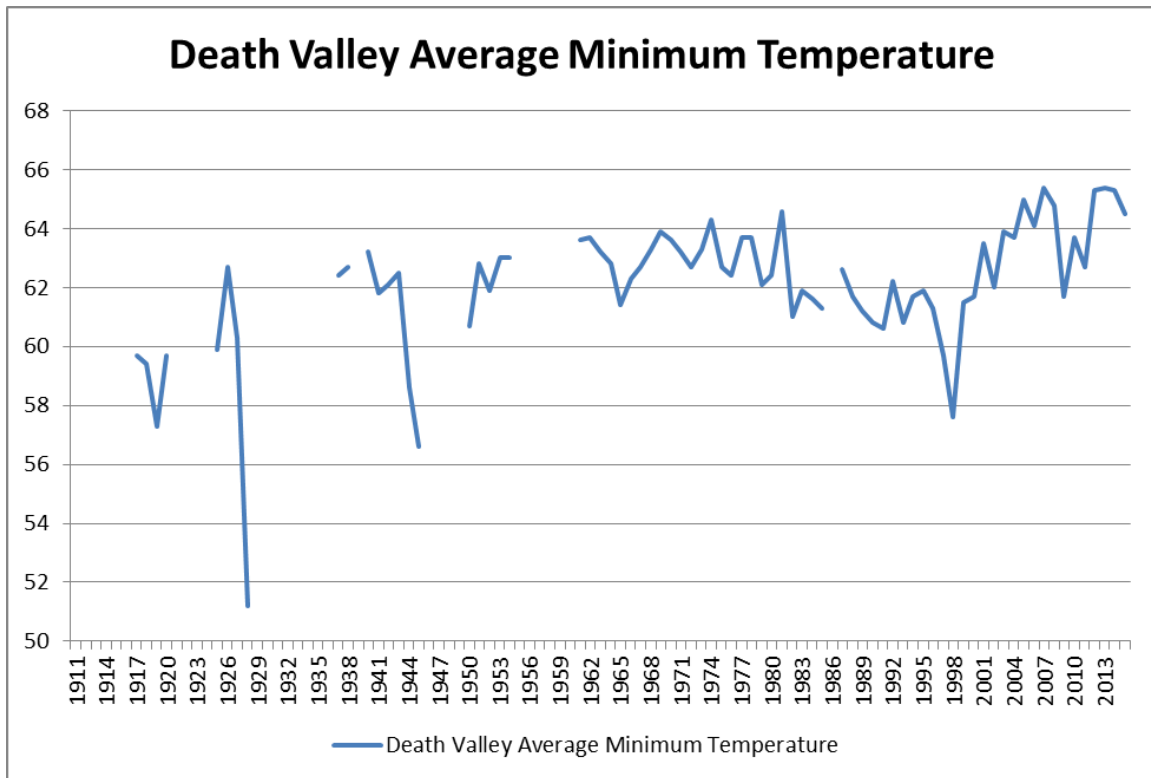
1960	39.5	45.0	58.5	66.4	71.4	86.1	90.8	87.4*	78.6	63.4	M	40.5	M
1961	37.4	47.7	54.9	64.8	71.4	86.5	91.5	87.8	74.0	61.4	46.9	37.5	63.6
1962	40.4	47.1	50.6	66.7	70.7	81.8	87.5	85.9	77.3	65.7	51.1	38.7	63.7
1963	34.1	53.4	52.9	59.3	75.5	77.7	88.3	85.7	75.8	68.1	50.2	36.4	63.2
1964	37.0	44.1	51.4	61.9	70.8	80.0	88.5	87.1	76.1	67.5	46.6	42.3	62.8
1965	42.2	46.3	53.4	61.1	70.4	76.6	84.9	84.3	70.5	60.9	47.9	36.8*	61.4**
1966	35.3	40.7*	50.0	63.1	74.5	81.4	86.5	87.0	75.6*	60.1*	50.7	40.9*	62.3**
1967	39.3	46.6	58.2*	53.5*	70.8	76.5	89.1	89.0	77.7	61.4	51.2	37.5	62.7**
1968	36.7	50.5	54.3	61.2	71.6	83.5	88.7	83.9	76.8	63.7	52.4	35.4	63.3
1969	43.2	44.7	51.9	63.6	75.0	79.2	88.8	89.5	79.1	59.5	50.1	40.3*	63.9**
1970	40.1	48.4	54.7	58.4	73.5	81.9	89.8	90.2	73.6	60.4	49.7	41.2	63.6
1971	40.1	46.4	51.8	61.4	68.8	80.8	90.9	93.4	76.9	58.5	47.4	40.8	63.2
1972	37.0	43.1	59.5	62.1	72.7	82.2	89.1	84.9	74.5	63.0	47.4	36.2	62.7
1973	37.8	49.0*	51.8	61.4	75.6	83.8	88.5	86.8	74.3	61.8	47.4	39.9	63.3**
1974	41.0	45.4	57.4	62.2	73.6	83.9	88.3	83.3	80.6	64.8	48.9	40.5	64.3
1975	38.0	47.5	53.8	58.5	70.8	82.4	87.5	84.0	77.7	62.2	47.2	42.1	62.7
1976	39.9	48.7	52.8	61.1	74.6	80.9	88.0	81.1	75.4	62.7	49.7	34.1	62.4
1977	39.4	47.3	50.8	66.5	66.6	86.8	88.9	86.4	75.3	63.7	48.3	44.1	63.7
1978	45.1	48.7	57.9	59.9*	68.0	82.9	87.1	86.4	74.2	65.7	50.7	36.5	63.7**
1979	41.5	43.9	55.0	61.2*	72.5	76.8	84.5	81.5	78.4	63.8	46.2	38.7	62.1**
1980	45.7	48.6*	52.2	61.1	67.0	76.9	87.2	85.2	73.5	61.3	47.4	41.7	62.4**
1981	43.4	47.0	55.2	65.3	72.0	86.0	88.6	85.6	78.5	60.7	51.2	40.7	64.6
1982	37.5	45.4	52.1	62.5	72.8	78.6	83.2	84.7	73.0	57.3	44.4	38.6*	61.0**
1983	37.3	46.5	53.4	57.2	69.0	79.6	83.4	82.5	78.5	63.9	51.1	39.9	61.9
1984	41.4	44.0	53.1	59.2	75.3	79.1	85.0	82.9	76.8	56.6	45.1*	38.7	61.6**
1985	37.5	43.1	51.1	63.2*	72.2	83.4	88.4	82.7	70.4	58.9	45.4	38.0	61.3
1986	40.7	47.3*	57.5	62.6*	73.5*	82.6*	83.5	88.4	71.3	M	49.7*	38.4	M
1987	40.1	49.8*	53.2	63.4	71.6	79.8	81.5	84.0	75.9	64.2	49.9	36.7	62.6**
1988	36.5	44.8	54.4	60.2	68.3*	78.3	88.2	83.9	73.3	64.8	48.6	38.6	61.7**
1989	35.7	43.4	56.3	68.1	70.3	81.0*	87.4	82.5	71.6	58.7	45.6	34.1	61.2**
1990	36.4	42.3	54.1	64.0	70.1	79.9	87.5	83.6	77.3	58.1	45.0	30.1	60.8
1991	35.5	45.9	50.1	58.8	65.6	76.1	84.4*	83.7	77.2	64.6	47.3	37.9	60.6
1992	36.6	48.7	55.4	64.8	76.6	78.3	82.1	84.5	74.1	63.8	45.4	36.0	62.2
1993	37.4	44.8	53.8	62.6	73.4	74.9	84.8	83.3	71.9	61.8	43.9	35.6	60.8
1994	36.9	41.5	57.6	62.4	70.7	82.8	89.8	87.1	74.0	59.2	41.3	36.0	61.7
1995	42.4	48.5	54.1	58.7	65.9	74.3	85.4	87.0	77.1	59.9	49.4	39.4	61.9
1996	38.6	48.0	53.3	63.2	71.6	81.1	88.2	82.3	71.5	56.5	45.0	35.7	61.3
1997	39.3	43.3	50.4	59.3	73.8	77.3	80.8	82.6	73.5	55.7	44.3	34.7	59.7
1998	35.8	40.9	48.7	53.4	61.4	71.7	84.1	81.9	72.3	55.5	45.6	38.4	57.6
1999	40.3	44.9	54.2	56.4*	71.3	79.7	85.8	84.9	75.1	60.0	46.0	38.5	61.5
2000	39.9	48.4	55.0*	63.8	72.2	82.8	85.6	83.8	71.4	59.6*	41.5	35.9	61.7**
2001	35.9	41.3	55.1*	60.2*	77.2*	84.4	86.0	88.5	76.7	63.6	51.5	38.8*	63.5**
2002	37.3	41.5	49.9	63.2	71.2	84.7	91.9	81.9	75.2	58.5	48.5	39.4	62.0
2003	42.6	45.8	54.4*	60.1	71.8	83.5	90.7	88.5	79.1	65.9	46.6	36.8	63.9**
2004	37.4	44.4	59.5	64.8	73.0	82.0	87.8	85.5*	74.9	62.4	49.8	42.5	63.7**
2005	46.3	50.8	55.5	60.8	75.2	81.3	93.3	87.8	73.9	64.4	51.2	38.9	65.0
2006	42.0	46.9	51.4	61.7	76.7	85.0	93.5	85.2	75.4	62.2	49.8	38.1	64.1
2007	38.3	47.8	58.2	65.1	76.4	84.3	92.4	89.9	78.3	62.5	51.7	38.4	65.4
2008	41.5	45.3	54.3	62.9	72.8	82.9	92.1	90.5	78.0	61.9	54.7	39.5	64.8
2009	41.2	43.7	52.2	60.5	77.3	76.7	89.1	81.7	78.4	58.1	44.7	35.5	61.7
2010	38.2	48.3	53.6	59.5	69.3	84.7	92.2	86.3	73.9	65.7	48.5	42.5	63.7
2011	37.9	43.9	54.3	62.8	69.1	81.7	87.4	86.8	79.1	63.8	46.4	38.3	62.7
2012	38.1	48.6	52.8	63.8	75.5	84.2	89.1	90.3	81.2	65.0	50.7	44.1	65.3

2013	39.4	46.8	59.2	67.4	75.3	87.1	92.0	88.5	80.9	59.9	49.6	37.8	65.4
2014	41.3	48.5	57.9	66.6	72.9	82.7	88.9	80.5	78.9	65.1	49.3	45.8	65.3
2015	43.3	51.7	59.2	62.9	71.8	85.4	84.8	87.5	77.6	79.5	46.6	36.7	64.5

* Contains 1-5 days of missing data.

**Average based on months that have 1-5 days of missing data.

M = a month missing more than 5 days of data or a year with at least one month of missing data.



Average annual minimum temperatures by year for Death Valley for the period of 1911-2015.
Blank areas of the blue line indicate missing data.

Highest Maximum Temperatures Recorded

134 degrees
July 10, 1913

131 degrees
July 13, 1913

130 degrees
July 12, 1913

129 degrees
June 30, 2013
July 6, 2007
July 19, 2005
July 17, 1998
July 18, 1960
July 11, 1913
July 9, 1913

Lowest Maximum Temperatures Recorded

38 degrees
December 23, 1990
January 21, 1937

39 degrees
December 22, 1990

40 degrees
January 22, 1937
January 20, 1937
January 8, 1937

41 degrees
December 21, 1990
January 11, 1949
January 10, 1930

Highest Minimum Temperatures Recorded

110 degrees

July 5, 1918

107 degrees

July 12, 2012

106 degrees

August 1, 1920

105 degrees

July 11, 1920

July 22, 1917

104 degrees

July 2, 2013

103 degrees

July 24, 1916

Lowest Minimum Temperatures Recorded

15 degrees

January 8, 1913

16 degrees

January 9, 1913

18 degrees

January 19, 1928

19 degrees

January 7, 1950

January 5, 1950

December 27, 1924

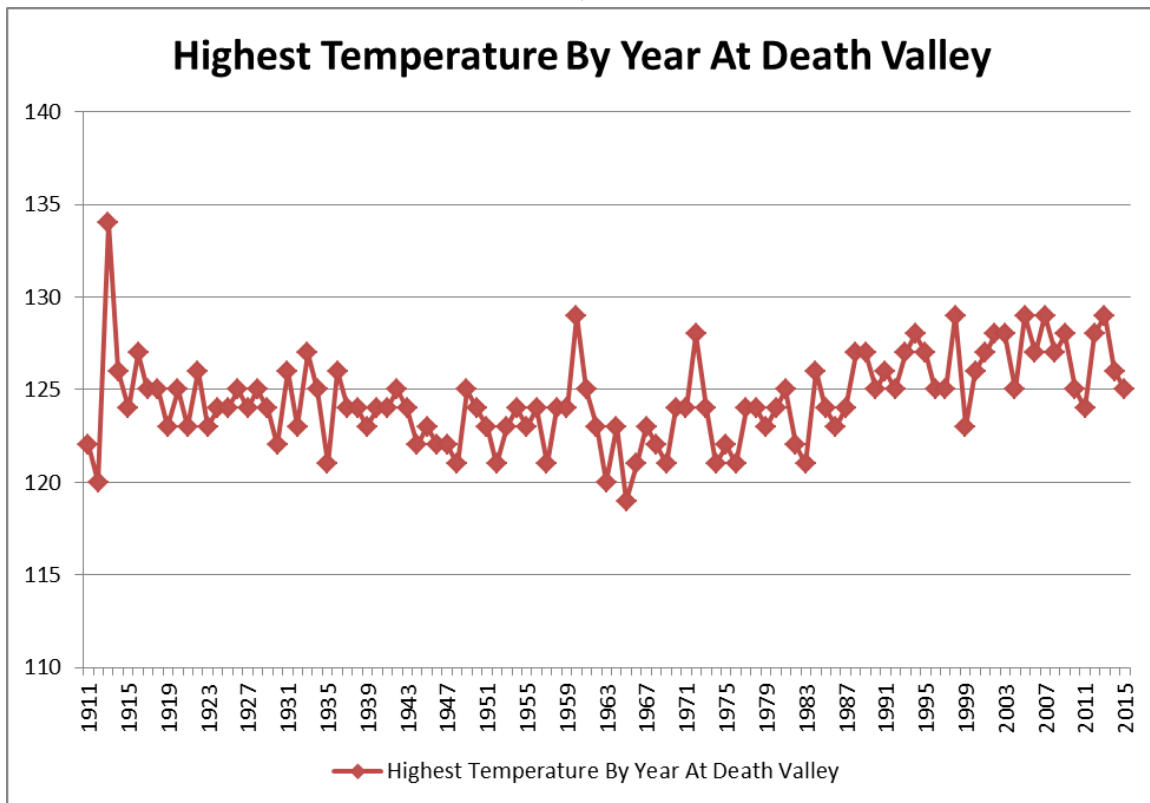
January 9, 1919

Highest Maximum Temperature By Year

Year	Date
1911	122 on July 14 & August 20
1912	120 on May 29, June 5 and August 8
1913	134 on July 10
1914	126 on August 6
1915	124 on August 11
1916	127 on July 23
1917	125 on July 12
1918	125 on August 3
1919	123 on August 20
1920	125 on July 31
1921	123 on July 1 and July 8
1922	126 on July 15
1923	123 on July 29
1924	124 on July 1 and August 27
1925	124 on July 13, July 14 and July 17
1926	125 on July 16
1927	124 on July 14
1928	125 on July 27
1929	124 on June 23
1930	122 on July 14
1931	126 on July 19, July 20 and July 26
1932	123 on August 5
1933	127 on July 26, July 27 and August 12
1934	125 on July 12 and July 27
1935	121 on July 13
1936	126 on August 6
1937	124 on August 11, August 12 and August 13
1938	124 on August 1 and August 2
1939	123 on July 13, July 14, July 22 and July 23
1940	124 on August 11
1941	124 on July 22
1942	125 on July 24
1943	124 on July 26 and July 27
1944	122 on August 12 and August 13
1945	123 on July 26 and August 24
1946	122 on August 3
1947	122 on July 19
1948	121 on August 30 and September 1
1949	125 on July 16
1950	124 on July 1
1951	123 on July 18

1952	121 on August 4
1953	123 on July 22 and July 23
1954	124 on June 22
1955	123 on June 7
1956	124 on June 28
1957	121 on June 25, June 27 and August 17
1958	124 on July 11
1959	124 on July 16
1960	129 on July 18
1961	125 on June 20, June 21, July 10 and July 11
1962	123 on August 15
1963	120 on July 15 and July 16
1964	123 on July 24
1965	119 on August 7, August 9 and August 10
1966	121 on August 5-7
1967	123 on July 1, July 2, July 3 and July 4
1968	122 on June 22
1969	121 on July 31, August 1, August 2, August 3, August 4 and August 15
1970	124 on July 18 and July 19
1971	124 on July 29 and August 10
1972	128 on July 14 and July 15
1973	124 on July 6
1974	121 on July 28 and July 29
1975	122 on July 25, July 26, July 27, August 5 and August 6
1976	121 on July 8, July 9 and July 10
1977	124 on August 2
1978	124 on August 8 and August 9
1979	123 on July 17, July 18 and July 19
1980	124 on July 26
1981	125 on August 8
1982	122 on July 30 and July 31
1983	121 on July 13
1984	126 on July 4
1985	124 on July 4 and July 5
1986	123 on August 5
1987	124 on July 14 and August 3
1988	127 on July 18
1989	127 on July 7
1990	125 on July 1 and July 12
1991	126 on July 4
1992	125 on August 3
1993	127 on August 2

1994	128 on June 29
1995	127 on July 29
1996	125 on July 2, July 25, August 1 and August 13
1997	125 on August 6 and August 7
1998	129 on July 17
1999	123 on July 1
2000	126 on June 15
2001	127 on July 2 and July 3
2002	128 on July 9
2003	128 on July 12
2004	125 on August 10 and August 11
2005	129 on July 19
2006	127 on July 16
2007	129 on July 6
2008	127 on July 9
2009	128 on July 18
2010	125 on July 25
2011	124 on June 23 and August 27
2012	128 on July 11
2013	129 on June 30
2014	126 on July 13
2015	125 on June 30



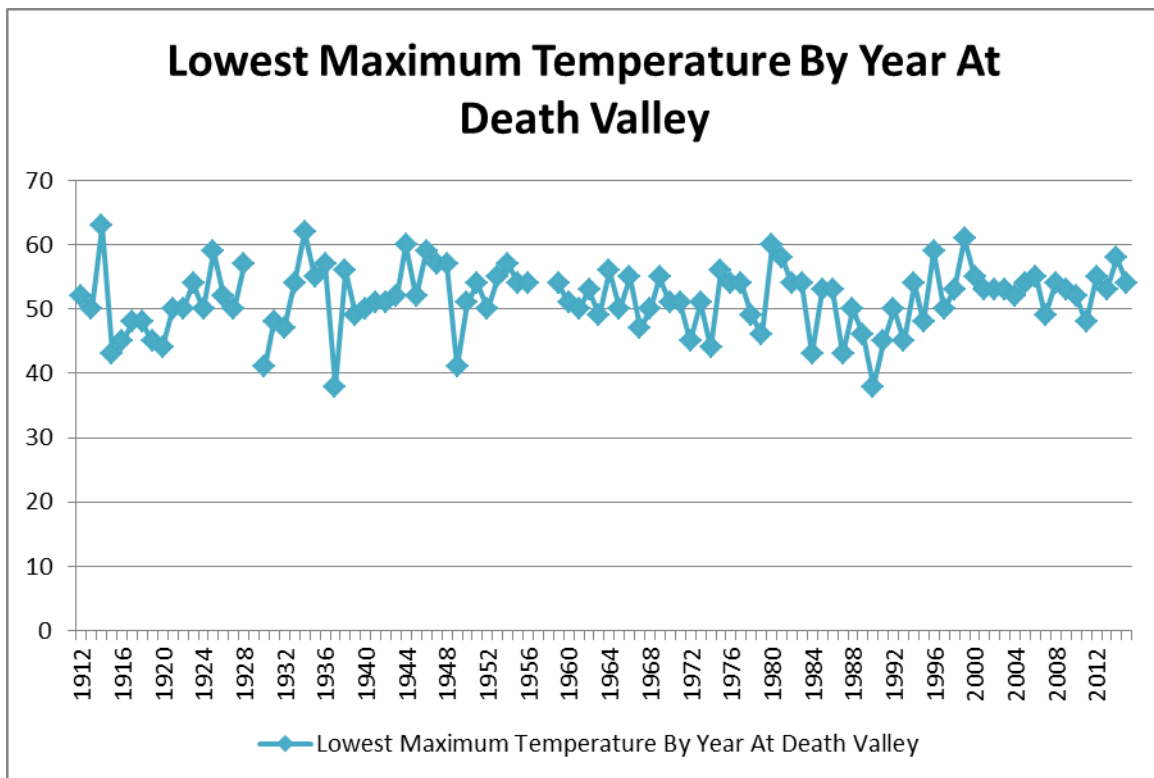
Highest maximum temperature by year at Death Valley, California.

Lowest Maximum Temperature By Year

Year	Date
1911	Incomplete data.
1912	52 on January 4
1913	50 on January 7 and 8
1914	63 on January 12
1915	43 on December 30
1916	45 on January 14
1917	48 on January 16
1918	48 on December 29, December 30 and December 31
1919	45 on November 27
1920	44 on February 9
1921	50 on January 12, January 13, January 22 and January 23
1922	50 on January 20
1923	54 on February 2
1924	50 on December 19
1925	59 on January 13
1926	52 on December 23
1927	50 on December 11
1928	57 on February 5
1929	Incomplete data.
1930	41 on January 10
1931	48 on November 23
1932	47 on December 11
1933	54 on February 8
1934	62 on December 19
1935	55 on January 5
1936	57 on December 30
1937	38 on January 21
1938	56 on February 18
1939	49 on February 3
1940	50 on December 17
1941	51 on December 28
1942	51 on January 5
1943	52 on January 20
1944	60 on January 10
1945	52 on December 4
1946	59 on February 5
1947	57 on December 5
1948	57 on January 26
1949	41 on January 11

1950	51 on January 4
1951	54 on December 7
1952	50 on January 6
1953	55 on December 24
1954	57 on December 28 and 30
1955	54 on January 1
1956	54 on January 30
1957	Incomplete data.
1958	Incomplete data.
1959	54 on January 6
1960	51 on January 15
1961	50 on December 14
1962	53 on January 22
1963	49 on January 13
1964	56 on November 17
1965	50 on December 21
1966	55 on January 3 and January 4
1967	47 on December 14
1968	50 on December 24
1969	55 on January 2
1970	51 on January 7
1971	51 on January 4 and January 8
1972	45 on December 10
1973	51 on January 9
1974	44 on January 4 and January 5
1975	56 on January 5
1976	54 on December 3
1977	54 on January 2
1978	49 on December 8 and December 9
1979	46 on February 1
1980	60 on January 9 and February 14
1981	58 on December 18
1982	54 on February 10 and December 29
1983	54 on February 3
1984	43 degrees on December 18
1985	53 on January 7, February 3 and February 5
1986	53 on February 11
1987	43 on December 24
1988	50 on January 5
1989	46 on February 8
1990	38 on December 23
1991	45 on January 4
1992	50 on December 7
1993	45 on January 6

1994	54 on December 10
1995	48 on January 4
1996	59 on February 26
1997	50 on January 15 and December 6
1998	53 on December 21
1999	61 on February 5
2000	55 on January 4
2001	53 on February 13
2002	53 on December 20
2003	53 on December 29
2004	52 on December 28
2005	54 on January 3, January 13 and December 17
2006	55 on December 26
2007	49 on January 14
2008	54 on December 17
2009	53 on February 7 and February 16
2010	52 on January 21
2011	48 on January 11
2012	55 on December 22
2013	53 on January 13
2014	58 on December 29
2015	54 on December 28



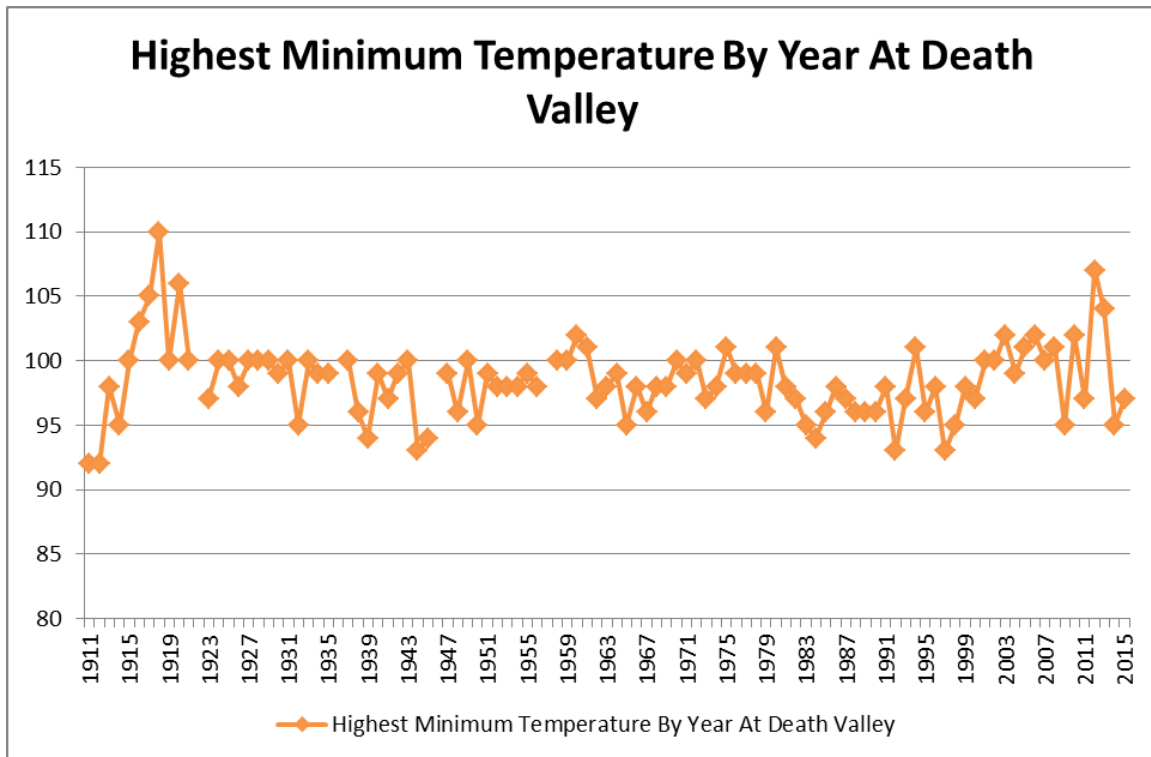
Lowest maximum temperature by year at Death Valley, California.

Highest Minimum Temperature By Year

Year	Date
1911	92 on July 17
1912	92 on July 17
1913	98 on September 7
1914	95 on June 30 and July 1
1915	100 on July 4, July 10, July 17, July 21, August 5, August 10 and August 12
1916	103 on July 24
1917	105 on July 22
1918	110 on July 5
1919	100 on July 21
1920	106 on August 1
1921	100 on July 31 and August 3
1922	Incomplete data.
1923	97 on July 29
1924	100 on July 29, August 11, August 12, August 14, September 1, September 2 and September 3
1925	100 on June 27, July 14 and August 4
1926	98 on July 17
1927	100 on June 16, July 8, July 9, July 10, July 12, July 17, July 19, July 20, July 23, July 24, July 28, August 1 and September 18
1928	100 on July 23, July 26 and July 29
1929	100 on July 24, August 11 and August 12
1930	99 on July 17 and July 19
1931	100 on July 12 and July 21
1932	95 on July 5 and August 8
1933	100 on July 17, July 18 and July 20
1934	99 on July 2 and August 19
1935	99 on July 14 and July 15
1936	Incomplete data.
1937	100 on August 12 and August 13
1938	96 on July 24
1939	94 on July 10, July 26 and July 27
1940	99 on August 12
1941	97 on July 23
1942	99 on July 10 and July 12
1943	100 on July 28
1944	93 on August 14
1945	94 on July 27

1946	Incomplete data.
1947	99 on August 7
1948	96 on July 18
1949	100 on July 15
1950	95 on July 25
1951	99 on July 16, August 1 and August 2
1952	98 on August 6
1953	98 on July 14, July 23, July 24, July 27 and July 30
1954	98 on July 16 and July 29
1955	99 on July 24 and August 10
1956	98 on June 30
1957	Incomplete record.
1958	100 on August 13
1959	100 on July 11, July 17, July 18 and July 19
1960	102 on July 19
1961	101 on July 18
1962	97 on August 17
1963	98 on July 22
1964	99 on July 25
1965	95 on August 9 and August 10
1966	98 on July 29
1967	96 on July 26, August 1 and August 5
1968	98 on July 21
1969	98 on August 3 and August 16
1970	100 on July 18, July 21 and August 11
1971	99 on July 24, August 2 and August 11
1972	100 on July 16
1973	97 on June 27, July 11 and August 19
1974	98 on July 29 and August 4
1975	101 on July 26
1976	99 on July 11
1977	99 on August 2
1978	99 on August 3
1979	96 on July 26
1980	101 on July 26
1981	98 on June 23
1982	97 on August 1
1983	95 on August 4
1984	94 on July 7, July 8 and August 14
1985	96 on June 19, July 9 and July 25
1986	98 on July 3
1987	97 on August 6
1988	96 on July 30

1989	96 on July 21 and July 25
1990	96 on July 13 and August 6
1991	98 on August 25
1992	93 on August 17
1993	97 on August 4
1994	101 on June 27
1995	96 on July 10 and August 7
1996	98 on July 26
1997	93 on July 17
1998	95 on July 19
1999	98 on August 20
2000	97 on August 2 and August 3
2001	100 on July 5
2002	100 on July 13
2003	102 on July 23
2004	99 on August 13
2005	101 on August 20 and August 21
2006	102 on July 27
2007	100 on September 3 and September 4
2008	101 on July 9
2009	95 on August 22
2010	102 on July 18
2011	97 on July 26
2012	107 on July 12
2013	104 on July 2
2014	95 on July 3 and July 14
2015	97 on June 28



Highest minimum temperature by year at Death Valley, California.

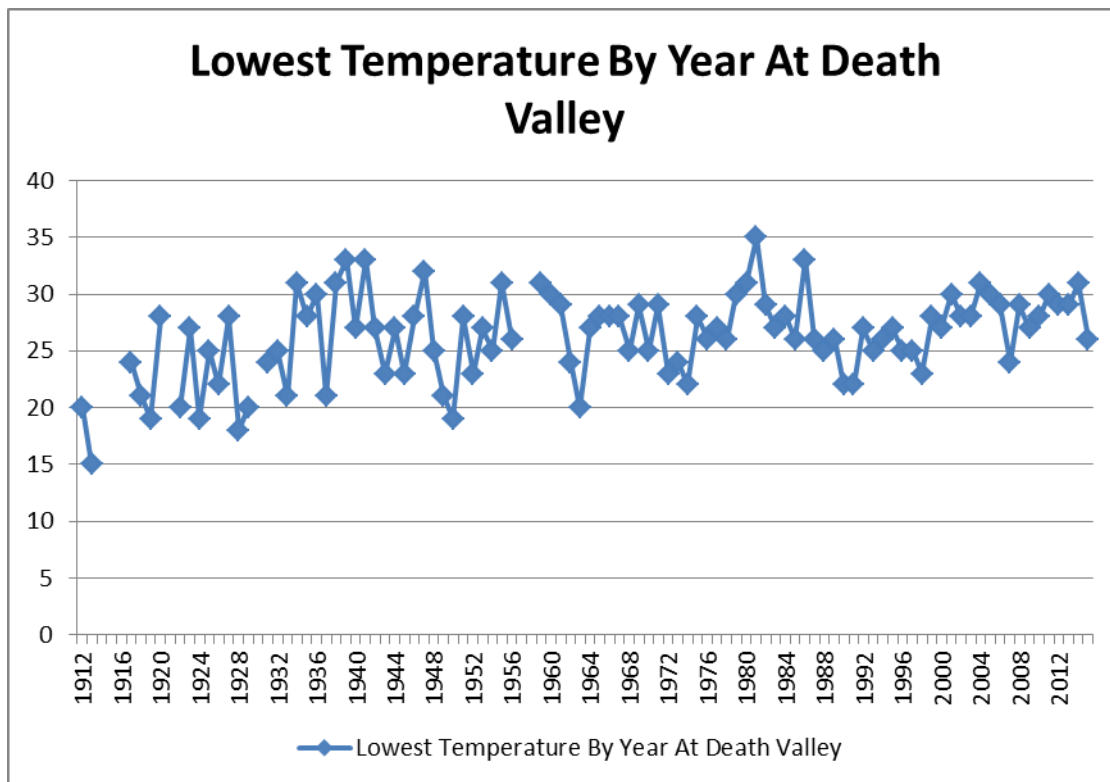
Lowest Minimum Temperature By Year

Year	Date
1911	Incomplete record.*
1912	20 on January 9
1913	15 on January 8
1914	Incomplete record.*
1915	Incomplete record.*
1916	Incomplete record.*
1917	24 on January 17
1918	21 on December 28
1919	19 on January 9
1920	28 on December 19
1921	Incomplete record.*
1922	20 on January 22
1923	27 on January 5 and February 2
1924	19 on December 27
1925	25 on January 14
1926	22 on December 25
1927	28 on January 25
1928	18 on January 19
1929	20 on January 22
1930	Incomplete data*
1931	24 on December 17
1932	25 on January 25, January 26 and February 4
1933	21 on February 13
1934	31 on December 2
1935	28 on December 17
1936	30 on January 20
1937	21 on January 25
1938	31 on November 25
1939	33 on February 10 and December 27
1940	27 on December 15
1941	33 on January 3, November 24 and December 25
1942	27 on December 9
1943	23 on January 19
1944	27 on December 19
1945	23 on December 17
1946	28 on January 10
1947	32 on December 15
1948	25 on January 29
1949	21 on January 8
1950	19 on January 7

1951	28 on January 9 and December 23
1952	23 on January 4 and January 5
1953	27 on December 25
1954	25 on January 2
1955	31 on January 14 and December 30
1956	26 on February 16
1957	Incomplete record.*
1958	Incomplete record.*
1959	31 on January 4
1960	30 on January 17
1961	29 on January 5 and December 13
1962	24 on December 29
1963	20 on January 13
1964	27 on December 16
1965	28 on December 20
1966	28 on January 23, January 24 and December 25
1967	28 on December 21
1968	25 on December 22
1969	29 on January 2
1970	25 on January 4
1971	29 on January 10 and January 11
1972	23 on December 12
1973	24 on January 7
1974	22 on January 3
1975	28 on January 4
1976	26 on December 25
1977	27 on January 11
1978	26 on December 31
1979	30 on January 4
1980	31 on December 11
1981	35 on December 25 and December 26
1982	29 on December 27
1983	27 on January 3
1984	28 on December 23, December 24 and December 25
1985	26 on February 6 and February 7
1986	33 on December 11
1987	26 on December 30
1988	25 on December 31
1989	26 on March 4
1990	22 on December 22, December 25 and December 31
1991	22 on January 1 and January 2

1992	27 on December 27
1993	25 on January 6
1994	26 on December 10 and December 11
1995	27 on December 28
1996	25 on December 20
1997	25 on January 14 and December 27
1998	23 on December 25
1999	28 on December 8
2000	27 on January 9
2001	30 on December 18 and December 19
2002	28 on January 31 and February 1
2003	28 on December 28 and December 29
2004	31 on December 25
2005	30 on December 16 and December 17
2006	29 on December 21
2007	24 on January 14
2008	29 on December 28
2009	27 on December 9
2010	28 on January 3, January 5 and January 6
2011	30 on December 8
2012	29 on December 22
2013	29 on December 7, December 11 and December 12
2014	31 on December 29
2015	26 on December 28

*Years with more than half of the days in January, February or December missing minimum temperatures are listed as incomplete.



Lowest minimum temperature by year at Death Valley, CA.

Number of Days (Temperature)

With A High Temperature of 125 degrees or higher

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	0	0	0	0	0	5/2013*	10/1913	3/1933,1936 &1998	0	0	0	0	10/1913
Least	0	0	0	0	0	0/2014*	0/2015*	0/2015*	0	0	0	0	0/2011*
Normal	0	0	0	0	0	0.2	2.1	0.5	0	0	0	0	2.9

Normals above are based on the period from 1981-2010 and are not computed by NCEI.

*Most recent of multiple occurrences.

With A High Temperature of 120 degrees or higher

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	0	0	0	0	2/2000 &2003	12/1961	29/1917	17/1917	3/1950 &2007	0	0	0	52/1917
Least	0	0	0	0	0/2015*	0/2005*	0/2015*	0/1999*	0/2015*	0	0	0	0/1965
Normal	0	0	0	0	0.2	2.3	9.5	6.2	0.2	0	0	0	18.4

Normals above are based on the period from 1981-2010 and are not computed by NCEI.

*Most recent of multiple occurrences.

With A High Temperature of 110 degrees or higher

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	0	0	0	3/2012	15/1997 &2001	27/1924	31/2014*	31/2015*	23/2012	4/1991	0	0	122/2012
Least	0	0	0	0/2015*	0/2011*	5/1944 &1965	16/1935	10/1976	0/1957 &1965	0/2015*	0	0	47/1941
Normal	0	0	0	0.2	4.8	17.4	27.4	26.5	12.2	0.5	0	0	89.1

Normals above are based on the period from 1981-2010 and are not computed by NCEI.

*Most recent of multiple occurrences.

With A High Temperature of 100 degrees or higher

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	0	0	4/2015	18/1989	29/1997	30/2015*	31/2014*	31/2015*	30/2008*	19/1991	0	0	161/2001
Least	0	0	0/2014*	0/2003*	3/1998	19/1944	27/1987	25/1983	11/1985 &1986	0/1998*	0	0	110/1998
Normal	0	0	0.3	4.7	17.0	26.7	30.7	30.5	24.3	6.2	0	0	140.4

Normals above are based on the period from 1981-2010.

*Most recent of multiple occurrences.

With A High Temperature of 90 degrees or higher

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	0	5/1986	24/1934	30/1928	31/2012*	30/2015*	31/2015*	31/2015*	30/2014*	31/1988	9/1950	0	221/1928
Least	0	0/2015*	0/1992*	0/1967	13/1977	27/1999	30/1918	29/1983	24/1986	4/1920	0/2013*	0	156/1920
Normal	0	0.4	5.5	16.3	27.1	29.6	31.0	30.9	29.0	19.7	1.1	0	190.5

Normals above are based on the period from 1981-2010.

*Most recent of multiple occurrences.

With A High Temperature below 50 degrees

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	13/1937	2/1989	0	0	0	0	0	0	0	0	2/1919	5/1990	13/1937
Least	0/2015*	0/2015*	0	0	0	0	0	0	0	0	0/2015*	0/2015*	0/2015*
Normal	0.4	0.1	0	0	0	0	0	0	0	0	0	0.5	1

Normals above are based on the period from 1981-2010 and are not calculated by NCEI.

*Most recent of multiple occurrences.

With A Low Temperature of 100 degrees or higher

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	0	0	0	0	0	3/1918	10/1927	3/1924	3/1924	0	0	0	14/1927
Least	0	0	0	0	0	0/2015*	0/2015*	0/2015*	0/2015*	0	0	0	0/2015*
Normal	0	0	0	0	0	0	0.4	0	0.1	0	0	0	0.5

Normals above are based on the period from 1981-2010 and are not calculated by NCEI.

*Most recent of multiple occurrences.

With A Low Temperature of 90 degrees or higher

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	0	0	0	0	3/1954	14/1961	31/1929	30/1929	9/1915	0	0	0	75/1915
Least	0	0	0	0	0/2015*	0/1999*	1/1944, 1983 &1992	0/1998*	0/2014*	0	0	0	2/1944 &1997
Normal	0	0	0	0	0.1	2.9	11.5	7.6	0.5	0	0	0	22.6

Normals above are based on the period from 1981-2010 and are not calculated by NCEI.

*Most recent of multiple occurrences.

With A Low Temperature of 32 degrees or below

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	25/1919	12/1929	2/1919	0	0	0	0	0	0	3/1924	6/1945	30/1928	58/1928
Least	0/2012*	0/2015*	0/2015*	0	0	0	0	0	0	0/2015*	0/2014*	0/2010*	0/1939, 1941, 1958 &1986
Normal	2.2	0.6	+	0	0	0	0	0	0	0	0.1	4.1	7.2

Normals above are based on the period from 1981-2010.

*Most recent of multiple occurrences.

+Occurred once in a 30 year period.

Number of Consecutive Days – Temperature

High Temperature of 125 degrees or higher
10 days from July 5, 1913 through July 14, 1913
8 days from June 28, 2013 through July 5, 2013
7 days from July 14, 2005 through July 20, 2005
5 days from July 16, 2009 through July 20, 2009
5 days from June 26, 1994 through July 1, 1994

High Temperature of 120 degrees or higher
43 days from July 6, 1917 through August 17, 1917
21 days from June 21, 1929 through July 11, 1929
14 days from June 27, 2013 through July 10, 2013
14 days from July 11, 2009 through July 24, 2009
14 days from July 21, 1980 through August 3, 1980

High Temperature of 110 degrees or higher
84 days from June 14, 1917 through September 5, 1917
80 days from June 13, 2008 through August 31, 2008
78 days from June 17, 1994 through September 2, 1994
73 days from June 11, 1960 through August 22, 1960

High Temperature of 100 degrees or higher
154 days from May 5, 2001 through October 5, 2001
145 days from May 18, 2003 through October 9, 2003
136 days from May 26, 1960 through October 8, 1960
134 days from May 22, 1974 through October 2, 1974

High Temperature of 90 degrees or higher
205 days from April 2, 1992 through October 23, 1992
178 days from April 16, 2012 through October 10, 2012
172 days from May 11, 2003 through October 29, 2003
164 days from April 25, 2006 through October 5, 2006
163 days from April 21, 1981 through October 1, 1981

High Temperature below 50 degrees
7 days from January 7, 1937 through January 13, 1937
6 days from January 20, 1937 through January 25, 1937
5 days from December 31, 1990 through January 4, 1991
5 days from January 3, 1974 through January 7, 1974

Low Temperature of 100 degrees or higher
3 days from July 17, 1959 through July 19, 1959
3 days from July 8, 1927 through July 10, 1927
3 days from September 1, 1924 through September 3, 1924

Low Temperature of 90 degrees or higher
47 days from July 1, 1929 through August 16, 1929
29 days from July 18, 1971 through August 15, 1971
24 days from July 11, 1959 through August 3, 1959
23 days from July 19, 1915 through August 10, 1915*

*Missing data on days just before and after streak. This may be a longer stretch.

Low Temperature of 33 degrees or higher (Freeze-Free Period)
445 days from January 14, 1977 through
420 days from February 5, 1913 through
387 days from December 12, 1980 through
363 days from January 6, 1974 through

Low Temperature of 32 degrees or below
30 days from December 2, 1928 through December 31, 1928
30 days from December 11, 1912 through January 9, 1913
20 days from December 20, 1949 through January 8, 1950
20 days from January 17, 1928 through February 5, 1928
20 days from December 24, 1918 through January 12, 1919

Low Temperature of 20 degrees or below
2 days from January 8, 1913 through January 9, 1913

**Earliest and Latest First Occurrence and Last Occurrence for
Specific Temperature Thresholds and Averages**

High Temperature of 110 degrees or higher

	Earliest	Latest
First Occurrence	April 8, 1989	June 15, 1953 and June 15, 1998
Last Occurrence	September 1, 1985	October 8, 1996
Average	May 18	September 22

High Temperature of 100 degrees or higher

	Earliest	Latest
First Occurrence	March 16, 2007	May 20, 1983
Last Occurrence	September 24, 1939	October 28, 1934
Average	April 14	October 11

High Temperature of 90 degrees or higher

	Earliest	Latest
First Occurrence	February 9, 2006	April 23, 1941
Last Occurrence	October 6, 1920	November 20, 2002
Average	March 12	November 1

Low Temperature of 40 degrees or below

	Earliest	Latest
First Occurrence	October 10, 1924	December 11, 1962
Last Occurrence	January 15, 2005	April 13, 1912
Average	November 18	February 21

Low Temperature of 32 degrees or below

	Earliest	Latest
First Occurrence	October 11, 1924	N/A*
Last Occurrence	N/A*	March 15, 1919
Average	December 10	January 17

*Three winter seasons had no freezing temperatures at Death Valley.

Average Extreme Temperature By Month

Based on the period of 1981-2010.

Average Coldest Low Temperature

Month	Temperature
January	30
February	35
March	41
April	49
May	57
June	66
July	77
August	73
September	64
October	49
November	35
December	27

Average Warmest High Temperature

Month	Temperature
January	78
February	82
March	94
April	105
May	113
June	121
July	125
August	123
September	113
October	105
November	89
December	77

Heating and Cooling Degree Days

Listed below are the thirty year normal heating and cooling degree days
(based on 65°F) by month.

	Monthly Normal Heating Degree Days	Monthly Normal Cooling Degree Days	Season Normal Heating Degree Days	Season Normal Cooling Degree Days
January	359	1	904	1
February	165	19	1069	20
March	42	149	1111	169
April	8	347	1119	516
May	1	670	1120	1186
June	0	917	0	2103
July	0	1155	0	3258
August	0	1091	0	4349
September	0	782	0	5131
October	4	381	4	5512
November	129	57	133	5569
December	412	1	545	5570
Annual	1120	5570	1120	5570

Precipitation Record

Precipitation records for Death Valley have been made through the period of record of November 1, 2015 by use of a Standard Rain Gauge. Precipitation values are for the observation day since precipitation is measured at the same time temperature observations are taken. From 1911 through May 31, 1981 (except for a few months in 1955, 1956 and 1957), daily observations always took place at 1600 or 1700 LST. From June 1, 1981 through November 1, 2015, observations were taken at 0800 LST/LDT. No attempt was made to adjust precipitation to a calendar day since the records are for a twenty four hour period and supplemental observations of how much fell each hour are not made. Therefore the extreme amounts listed by day are the highest value ever on that observation day and the monthly totals and extremes are computed off the sum of the observational day values for that month. On November 2, 2015, precipitation records switched to be taken at 2359 LST and from this point out, records reflect calendar day precipitation. On November 2, 2015, precipitation totals are primarily recorded using an automated tipping bucket rain gauge. However, an eight inch standard rain gauge remains on-site for use as a back-up and to account for any low bias that may be reflected in the tipping bucket record with calculations made to fit standard rain gauge totals to the calendar day.

Records of precipitation in Death Valley started on June 8, 1911. All precipitation data is given in inches. An overview of each month's precipitation is listed below, followed by normal and the record highest amount for each day and month. Normals are from 1981-2010 and provided NOAA's National Centers for Environmental Information (NCEI).

Month	Normal Precipitation
January	0.39 inch
February	0.51 inch
March	0.30 inch
April	0.12 inch
May	0.03 inch
June	0.05 inch
July	0.07 inch
August	0.13 inch
September	0.21 inch
October	0.07 inch
November	0.18 inch
December	0.30 inch
Annual	2.36 inches

Observation Date Precipitation

January

Period of Record: 1912-2016

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.01	0.20/1922
2	0.01	0.06/2006
3	0.01	0.14/1978*
4	0.01	0.99/2005
5	0.01	0.62/1995
6	0.01	0.40/1992
7	0.01	0.13/1993
8	0.01	0.56/1974
9	0.01	0.40/1930
10	0.02	0.09/1955
11	0.01	0.48/2001
12	0.01	0.06/1937
13	0.01	0.45/1957
14	0.02	0.10/1969
15	0.01	0.65/1960
16	0.01	0.14/1978
17	0.02	0.80/1988*
18	0.01	0.70/1916
19	0.01	0.34/1973
20	0.02	0.90/1954
21	0.01	0.30/2010
22	0.01	0.98/2010
23	0.01	0.25/1943
24	0.01	0.45/1995
25	0.02	0.60/1995
26	0.01	0.64/1941
27	0.01	0.41/2001
28	0.02	0.50/1915
29	0.02	0.60/1915
30	0.01	1.00/1922
31	0.02	0.26/2015*

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

February

Period of Record: 1912-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.02	0.62/1940
2	0.01	0.44/1940
3	0.02	0.22/1939
4	0.02	0.51/1998
5	0.01	0.22/1935
6	0.02	0.53/1935
7	0.02	0.69/1976
8	0.01	0.96/2009
9	0.02	0.82/1976
10	0.02	0.84/1968
11	0.01	0.74/1973
12	0.02	0.20/2005
13	0.02	0.92/2003
14	0.02	1.00/1927
15	0.02	0.22/1998
16	0.02	0.30/1959
17	0.02	0.40/1980
18	0.02	0.28/1969
19	0.02	0.62/1969
20	0.02	0.26/1941
21	0.03	0.64/1970
22	0.02	0.97/1944
23	0.01	0.58/2004
24	0.02	0.99/1998
25	0.02	0.70/1913
26	0.02	0.58/2001
27	0.02	0.58/1949
28	0.02	0.43/2010
29	-	0.18/1960

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

March

Period of Record: 1912-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.01	1.00/1978
2	0.02	0.33/1981
3	0.01	0.96/1983
4	0.02	0.30/1943
5	0.01	0.08/1981
6	0.01	0.29/2000
7	0.02	0.25/1987
8	0.01	0.32/1974
9	0.02	0.70/1912
10	0.01	0.22/1969
11	0.01	0.30/1918
12	0.01	0.10/1973*
13	0.01	0.05/1973*
14	0.01	0.13/1986
15	0.01	0.47/1987
16	0.01	0.50/1952
17	0.01	0.29/1982
18	0.01	0.64/1982
19	0.01	0.32/1979
20	0.00	0.10/1979
21	0.01	0.40/1991
22	0.00	0.10/1920
23	0.01	0.30/1954
24	0.01	0.08/2011
25	0.00	0.20/2005
26	0.01	0.60/1998
27	0.01	0.52/1991
28	0.00	0.28/1993
29	0.01	0.40/1912
30	0.00	0.10/1930
31	0.01	0.38/1978

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

April

Period of Record: 1912-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.01	0.58/1940
2	0.00	0.23/1937
3	0.01	0.14/1965
4	0.00	0.46/1965
5	0.01	0.28/1926
6	0.00	0.29/1943
7	0.01	0.10/1958
8	0.00	0.27/1965
9	0.01	0.24/1965
10	0.00	0.09/1967
11	0.01	0.47/1941
12	0.00	0.11/1965
13	0.00	0.27/1956
14	0.01	0.21/1939
15	0.00	<u>1.47/1988</u>
16	0.00	0.20/1988
17	0.01	T/1988*
18	0.00	0.04/1972
19	0.00	T/2003*
20	0.01	0.03/1988
21	0.00	0.37/1957
22	0.00	0.02/2010
23	0.01	0.18/1942
24	0.00	0.34/1939
25	0.00	0.10/1947
26	0.01	0.13/1952
27	0.00	0.01/1994
28	0.01	0.12/1952
29	0.00	0.09/1980
30	0.00	0.27/1980

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

May

Period of Record: 1912-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.00	0.40/1930
2	0.00	0.14/1938
3	0.00	0.03/1991
4	0.01	T/1982*
5	0.00	0.07/1998
6	0.00	0.07/1976
7	0.00	0.08/1986*
8	0.00	0.10/1977
9	0.00	0.60/1977
10	0.00	0.24/1985
11	0.00	0.18/1957
12	0.01	0.03/1935
13	0.00	0.05/1998*
14	0.00	0.12/1939
15	0.00	0.02/1957
16	0.00	0.05/1944
17	0.00	0.44/1949
18	0.00	0.02/1987
19	0.00	0.40/1916
20	0.00	0.05/1957
21	0.00	0.10/1920
22	0.00	0.04/2015
23	0.01	0.11/1977
24	0.00	0.48/1941
25	0.00	0.11/1996
26	0.00	0.01/2008
27	0.00	0.03/1999
28	0.00	0.01/1990
29	0.00	0.01/1913
30	0.00	0.11/1948
31	0.00	0.01/1913

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

June

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.00	T/1973*
2	0.00	0.05/1914
3	0.00	0.00/2014*
4	0.00	0.08/1998
5	0.01	0.10/1931
6	0.00	0.18/1972
7	0.00	0.25/1972
8	0.00	0.26/1968
9	0.00	0.08/1957
10	0.01	0.05/1957
11	0.00	0.10/1998
12	0.00	0.05/1963
13	0.00	0.04/1998
14	0.00	0.40/1997
15	0.00	T/1997*
16	0.01	0.16/2004
17	0.00	0.00/2014*
18	0.00	0.00/2014*
19	0.00	0.03/1988
20	0.00	T/1938
21	0.00	T/1944
22	0.01	0.10/1972
23	0.00	0.09/1988
24	0.00	T/1936
25	0.00	0.00/2012*
26	0.00	T/1961
27	0.01	T/1922
28	0.00	0.60/1920
29	0.00	T/1938*
30	0.00	0.02/1980

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

July

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.00	0.31/1925
2	0.00	0.00/2015*
3	0.01	T/1961
4	0.00	T/1961
5	0.00	0.10/2011
6	0.00	0.05/2001
7	0.00	0.20/2001
8	0.00	0.00/2015*
9	0.01	0.04/1966
10	0.00	0.01/1999
11	0.00	T/1939
12	0.00	0.02/1992
13	0.00	0.04/2008
14	0.00	0.06/1984
15	0.01	0.21/1999
16	0.00	0.20/1999
17	0.00	0.12/1990
18	0.00	0.06/2002
19	0.01	0.05/1922
20	0.00	0.50/1969
21	0.00	0.20/1984
22	0.01	0.30/1913
23	0.00	0.60/1974
24	0.00	0.41/1956
25	0.00	0.16/1965
26	0.01	0.75/1954
27	0.00	0.30/1964
28	0.00	0.64/1934
29	0.00	0.25/1997
30	0.01	0.38/1966
31	0.00	0.19/1991

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

August

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.00	0.29/2011
2	0.01	0.10/1966
3	0.00	0.08/1922
4	0.00	0.05/1964
5	0.01	1.10/1936
6	0.00	0.09/1964
7	0.01	0.02/1982
8	0.00	0.37/1941
9	0.00	0.17/1983
10	0.01	0.33/1983
11	0.00	0.40/1942
12	0.01	0.01/1979
13	0.00	0.02/1982
14	0.00	0.10/1965
15	0.01	0.51/1984
16	0.00	0.66/1984
17	0.01	0.95/1977
18	0.00	0.19/1983
19	0.00	0.32/1983
20	0.01	0.08/1983
21	0.00	0.01/1975
22	0.01	0.60/1946
23	0.00	0.05/1961
24	0.01	0.10/1920
25	0.00	0.00/2013*
26	0.01	0.07/1938
27	0.00	0.22/1988
28	0.01	0.30/1922
29	0.00	0.02/2000
30	0.01	0.36/1938
31	0.00	0.16/2000

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

September

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.00	T/1940
2	0.01	0.00/2015*
3	0.00	0.32/1997
4	0.01	0.33/1967
5	0.00	0.38/1998
6	0.00	0.32/1978
7	0.01	0.40/1950
8	0.01	0.57/2014
9	0.00	0.23/1980
10	0.01	0.37/1976
11	0.01	0.34/1976
12	0.01	0.53/2004
13	0.01	0.47/1959
14	0.00	0.15/1923
15	0.01	0.00/2015*
16	0.01	0.00/2015*
17	0.01	0.10/1938
18	0.01	0.52/1963
19	0.01	0.29/1963
20	0.01	0.60/1939
21	0.00	0.65/2005
22	0.01	0.63/2007
23	0.01	0.14/1990
24	0.01	0.20/1990
25	0.00	0.96/1939
26	0.01	1.11/1997
27	0.01	0.18/1983
28	0.01	0.03/1967
29	0.00	0.20/1911
30	0.01	1.20/1911

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

October

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.00	0.03/1981*
2	0.01	0.43/1976
3	0.00	0.04/1974
4	0.01	0.55/1972
5	0.00	0.55/2015
6	0.00	0.26/1945
7	0.00	0.05/1974
8	0.01	0.50/1923
9	0.00	0.20/1943
10	0.00	0.00/2014*
11	0.00	0.10/1928
12	0.00	0.04/1947
13	0.00	0.20/1987
14	0.01	0.07/2006
15	0.00	0.16/2015
16	0.00	0.25/2015
17	0.00	0.55/1934
18	0.00	0.08/2005
19	0.00	0.48/1972
20	0.00	0.35/1926
21	0.01	0.06/2010
22	0.00	0.04/2010
23	0.00	0.10/1921
24	0.00	0.26/1941
25	0.00	0.06/1998
26	0.01	0.05/1974
27	0.00	0.08/2004
28	0.00	0.10/1992
29	0.00	0.36/1974
30	0.01	0.20/1920
31	0.00	0.40/1996

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

November

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.01	0.30/1987
2	0.00	0.80/1913
3	0.01	0.00/2015*
4	0.00	0.00/2015*
5	0.01	0.51/1944
6	0.00	0.69/1987
7	0.01	0.02/2010*
8	0.01	0.75/2004
9	0.00	1.40/1923
10	0.01	0.30/1923
11	0.00	0.75/1954
12	0.01	0.50/1944
13	0.00	0.90/1946
14	0.01	0.06/1972
15	0.01	0.32/1952
16	0.00	0.31/1952
17	0.01	0.24/1972
18	0.00	0.24/1987
19	0.01	0.60/1913
20	0.01	0.30/1967
21	0.00	0.22/1963
22	0.01	0.29/1965
23	0.00	0.25/1965
24	0.01	0.09/2013
25	0.01	0.20/1961
26	0.00	0.44/2008
27	0.01	0.22/1960
28	0.01	0.01/1967*
29	0.00	0.80/1981
30	0.01	0.20/1913

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

December

Period of Record: 1911-2015

Normals: 1981-2010

Date	Normal Precipitation	Record Precipitation
1	0.01	0.12/1947
2	0.00	0.16/1961
3	0.01	0.53/2014
4	0.01	0.30/1919
5	0.01	0.38/1947
6	0.01	0.32/1997
7	0.00	0.25/1992
8	0.01	0.55/2007
9	0.01	0.29/1965
10	0.01	0.27/1941
11	0.01	0.01/1941
12	0.01	0.35/1927
13	0.01	0.28/1934
14	0.00	0.06/1934
15	0.01	0.06/1993
16	0.01	0.09/1924
17	0.01	0.31/1987
18	0.01	0.15/1938
19	0.01	0.72/1938
20	0.01	0.41/1938
21	0.02	0.51/1943
22	0.01	0.22/1945
23	0.01	0.23/1945
24	0.01	0.23/1959
25	0.01	0.51/1983
26	0.01	0.72/1946
27	0.01	0.27/1971
28	0.01	0.39/1977
29	0.02	1.25/2004
30	0.01	0.14/1991
31	0.01	0.20/1936

* Also in previous years.

Bold values are the monthly extremes.

Bold and underlined values are the all-time extremes.

Death Valley Precipitation Records

Maximum 24 Hour Precipitation*

Month	Amount/Date
January	1.00 inch / January 29 - 30, 1922
February	1.00 inch / February 14, 1927
March	1.00 inch / March 1, 1978
April	1.47 inches / April 14 - 15, 1988
May	0.60 inch / May 8 - 9, 1977
June	0.60 inch / June 28, 1920
July	0.75 inch / July 25 - 26, 1954
August	1.10 inches / August 5, 1936
September	1.20 inches / September 29 - 30, 1911
October	0.55 inch / October 17, 1934
November	1.40 inches / November 9, 1923
December	1.25 inches / December 28 - 29, 2004
Annual	1.47 inches / April 14 - 15, 1988

* Date based on time provided by observer.

Wettest 24 Hour Periods Ever

1. 1.47 inches / April 14 – 15, 1988
2. 1.40 inches / November 9, 1923
3. 1.25 inches / December 28 – 29, 2004
4. 1.20 inches / September 29 – 30, 1911
5. 1.11 inches / September 25 – 26, 1997
6. 1.10 inches / August 5, 1936
7. 1.00 inch / March 1, 1978
7. 1.00 inch / February 14, 1927
7. 1.00 inch / January 29 – 30, 1922
10. 0.99 inch / January 3 – 4, 2005
10. 0.99 inch / February 23 – 24, 1998
12. 0.98 / January 21 – 22, 2010
13. 0.97 inch / February 22, 1944
14. 0.96 inch / February 7 – 8, 2009
14. 0.96 inch / March 2 – 3, 1983
14. 0.96 inch / September 24 – 25, 1939
17. 0.95 inch / August 17, 1977
18. 0.92 inch / February 12 – 13, 2003
19. 0.90 inch / January 19 – 20, 1954
19. 0.90 inch / November 13, 1946

Wettest and Driest Months, Seasons and Years

Listed below are the ten wettest months and years on record followed by the driest.

January

Wettest Januaries	
1.	2.59 inches / 1995
2.	1.84 inches / 2005
3.	1.56 inches / 2010
4.	1.51 inches / 1916
5.	1.20 inches / 1988
5.	1.20 inches / 1974
5.	1.20 inches / 1922
8.	1.11 inches / 1954
9.	1.10 inches / 1915
10.	1.03 inches / 2001

Driest Januaries									
Years With No Precipitation (0.00 inch)									
1912	1918	1919	1923	1924	1925	1928	1929	1936	1945
1946	1947	1948	1950	1951	1953	1956	1968	1971	1972
1976	1984	1991	1996	2002	2004	2014			
Years With A Trace									
1926	1931	1932	1934	1942	1962	1967	1970	1975	1989
1997	2000	2003							

February

Wettest Februaries	
1.	2.37 inches / 1976
2.	2.31 inches / 1998
3.	1.90 inches / 1913
4.	1.87 inches / 1969
5.	1.53 inches / 2010
6.	1.36 inches / 2009
6.	1.36 inches / 1970
8.	1.35 inches / 1993
9.	1.32 inches / 2001
10.	1.26 inches / 2005

Driest Februaries									
Years With No Precipitation (0.00 inch)									
1912	1917	1919	1921	1924	1925	1929	1930	1933	1948
1950	1952	1953	1954	1956	1957*	1965	1967	1972	1977
1985	1989	1991**	1999	2002	2013				
Years With A Trace									
1923	1934	1947	1955	1961	1974	1975	1984	2008	
2014									

*Missing 4 days of data.

** Missing 2 days of data.

March

Wettest Marches	
1.	1.64 inches / 1978
2.	1.32 inches / 1952
3.	1.14 inches / 1983
4.	1.13 inches / 1987
5.	1.10 inches / 1912
6.	1.01 inches / 1982
7.	1.00 inch / 1991
8.	0.81 inch / 1980
9.	0.75 inch / 1992
9.	0.75 inch / 1918

Driest Marches									
Years With No Precipitation (0.00 inch)									
1914	1917	1921	1925	1926	1927	1929	1931	1932	1933
1950	1951	1953	1955	1956	1957	1966	1972	1985	1989
1997	1999	2008	2009	2012					
Years With A Trace									
1922	1923	1934	1940	1959	1961	1967	1968	1970	1984

April

Wettest Aprils	
1.	1.70 inches / 1988
2.	1.27 inches / 1965
3.	0.69 inch / 1939
4.	0.63 inch / 2003
5.	0.58 inch / 1941
5.	0.58 inch / 1940
7.	0.55 inch / 1943
8.	0.46 inch / 1999
9.	0.41 inch / 1956
10.	0.40 inch / 1980

Driest Aprils									
Years With No Precipitation (0.00 inch)									
1913	1916	1919	1920	1921	1927	1928	1929	1930	1932
1933	1934	1935	1936	1950	1953	1954	1959	1960	1962
1969	1974	1977	1979	1981	1984	1985	1989	1990	1991
1993	1995	1996	1997	2002	2008	2009	2011	2015	
Years With A Trace									
1912	1922	1923	1945	1949	1951	1966	1970	1982	1992
2000					2013				

May

Wettest Mays	
1.	0.96 inch / 1977
2.	0.48 inch / 1941
3.	0.47 inch / 1949
4.	0.41 inch / 1957
5.	0.40 inch / 1980
5.	0.40 inch / 1930
5.	0.40 inch / 1916
8.	0.34 inch / 1978
9.	0.30 inch / 1917
10.	0.26 inch / 1985

Driest Mays									
Years With No Precipitation (0.00 inch)									
1914	1919	1921	1923	1924	1925	1926	1927	1928	1929
1931	1936	1943	1946	1950	1951	1952	1953	1954	1956
1958	1959	1960	1965	1966	1967	1968	1970	1972	1979
1981	1984	1989	1993	1994	1997	2002	2004	2007	2013
Years With A Trace									
1912	1918	1932	1933	1934	1937	1940	1942	1947	1962
1963	1974	1975	1988	2000	2005	2009	2010	2012	

June

Wettest Junes	
1. 0.60 inch / 1920	
2. 0.53 inch / 1972	
3. 0.40 inch / 1997	
4. 0.26 inch / 1968	
5. 0.22 inch / 1998	
6. 0.16 inch / 2004	
6. 0.16 inch / 1963	
8. 0.13 inch / 1957	
9. 0.12 inch / 1988	
10. 0.10 inch / 1969	
10. 0.10 inch / 1949	
10. 0.10 inch / 1931	

Driest Junes									
Years With No Precipitation (0.00 inch)									
1912	1913	1915	1916	1917	1918	1919	1921	1923	1924
1927	1928	1929	1930	1935	1939	1940	1942	1946	1947
1950	1951	1952	1953	1954	1955	1956	1958	1959	1962
1964	1970	1971	1974	1977	1978	1979	1981	1982	1983
1984	1985	1986	1987	1989	1991	1992	1993	1994	1996
1999	2001	2002	2003	2005	2007	2008	2010	2011	2012
2013			2014				2015		
Years With A Trace									
1922	1925	1926	1933	1934	1936	1937	1938	1943	1944
1945	1948	1960	1961	1965	1966	1973	1975	1976	2000
2006					2009				

July

Wettest Julys	
1. 0.75 inch / 2013	
1. 0.75 inch / 1954	
3. 0.70 inch / 1950*	
4. 0.68 inch / 1974	
4. 0.68 inch / 1964	
6. 0.64 inch / 1934	
7. 0.60 inch / 1913	
8. 0.56 inch / 1936	
9. 0.50 inch / 1969	
10. 0.42 inch / 1999	
10. 0.42 inch / 1984	
10. 0.42 inch / 1966	

* Missing 1 day of data.

Driest Julys									
Years With No Precipitation (0.00 inch)									
1911	1914	1916	1918	1920	1921	1923	1924	1926	1927
1928	1929	1930	1931	1932	1940	1942	1944	1947	1948*
1949	1955	1957	1959	1960	1963	1970	1972	1973	1977
1978	1980	1981	1988	1989	1993	1994	1995	2000	2004
2005									
Years With A Trace									
1935	1937	1939	1941	1943	1945	1946	1951	1953	1961
1962			1983			2007			

* Missing 5 days of data.

August

Wettest Augusts	
1.	1.35 inches / 1936
2.	1.20 inches / 1984
3.	1.14 inches / 1977
4.	1.12 inches / 1983
5.	0.75 inch / 1961
6.	0.74 inch / 2012
7.	0.65 inch / 1946
8.	0.53 inch / 2011
9.	0.52 inch / 1941
10.	0.43 inch / 1938

Driest Augusts									
Years With No Precipitation (0.00 inch)									
1911	1912	1914	1915	1916	1917	1919	1921	1924	1927
1928	1929	1932	1937	1940	1943	1944	1948	1950	1951*
1952	1953	1954	1955	1956	1957	1960	1962	1963	1967
1969	1976	1980	1981	1985	1987	1989	1991	1992	1993
1994	1996	1999	2001	2002	2006	2008			
Years With A Trace									
1923	1930	1934	1935	1947	1959	1970	1973	1974	1990
1995		1997			2010		2015		

* Missing 3 days of data.

September

Wettest Septembers	
1.	1.57 inches / 1939
2.	1.48 inches / 1997
3.	1.40 inches / 1911
4.	1.12 inches / 1963
5.	0.87 inch / 1976
6.	0.76 inch / 2005
7.	0.63 inch / 2007
8.	0.57 inch / 2014
9.	0.56 inch / 1990
10.	0.53 inch / 2004

Driest Septembers									
Years With No Precipitation (0.00 inch)									
1912	1914	1915	1916	1918	1919	1920	1921	1922	1924
1925	1926	1927	1928	1929	1930	1931	1933	1936	1941
1942	1945	1947	1948	1951	1952	1953	1954	1955	1956
1960	1961	1964	1965	1968	1969	1970	1973	1974	1977
1984	1987	1989	1992	1993	1994	1995	1996	2000	2001
2002	2003	2008	2009	2010	2012	2015			
Years With A Trace									
1934	1935	1937	1944	1946	1972	1979	1981	1986	

October

Wettest Octobers	
1.	1.30 inches / 2015
2.	1.09 inches / 1972
3.	0.82 inch / 1974
4.	0.59 inch / 2012
5.	0.55 inch / 1934
6.	0.50 inch / 1923
7.	0.47 inch / 1976
8.	0.45 inch / 1941
9.	0.42 inch / 1996
10.	0.38 inch / 1945

Driest Octobers									
Years With No Precipitation (0.00 inch)									
1911	1913	1914	1915	1917	1919	1922	1924	1927	1929
1930	1949	1950	1952	1954	1955	1956	1959	1965	1966
1967	1969	1970	1977	1980	1982	1985	1988	1989	1990
1991	1993	1994	1997	1999	2001	2003	2007	2011	2014
Years With A Trace									
1931	1933	1935	1937	1939	1940	1942	1944	1946	1953
1962		1971		1979		2009		2013	

November

Wettest Novembers	
1.	1.70 inches / 1923
2.	1.61 inches / 1913
3.	1.50 inches / 1946
4.	1.45 inches / 1978
5.	1.01 inches / 1944
6.	0.86 inch / 1965
7.	0.81 inch / 1970
8.	0.80 inch / 1981
9.	0.78 inch / 2004
10.	0.75 inch / 1954

Driest Novembers									
Years With No Precipitation (0.00 inch)									
1911	1912	1914	1915	1916	1918	1920	1921	1924	1925
1927	1928	1929	1930	1932	1940	1942	1945	1948	1949
1950	1956	1959	1962	1968	1976	1978	1979	1980	1984*
1989	1991	1992	1994	1995	1996	1998	1999	2000	2006
Years With A Trace									
1922	1926	1934	1935	1937	1938	1943	1947	1953	1955
1971	1974	1990	2007	2012	2015				

*Missing 2 days of data.

December

Wettest Decembers	
1.	1.51 inches / 1938
2.	1.31 inches / 2004
3.	1.18 inches / 1946
4.	0.87 inch / 1992
5.	0.85 inch / 1943
6.	0.77 inch / 1959
7.	0.65 inch / 1936
8.	0.63 inch / 1971
9.	0.60 inch / 1914
10.	0.59 inch / 2014

Driest Decembers									
Years With No Precipitation (0.00 inch)									
1911	1912	1913	1915	1916	1917	1918	1920	1922	1923
1925	1929	1930	1944	1948	1950	1953	1954	1955	1956
1958	1960	1963	1969	1976	1979	1980	1981	1989	1990
1998	1999	2000	2005						
Years With A Trace									
1926	1933	1968	1972	1975	1986	2001			
2013					2015				

Wettest Months

Wettest Months
1. 2.59 inches / January 1995
2. 2.37 inches / February 1976
3. 2.31 inches / February 1998
4. 1.90 inches / February 1913
5. 1.87 inches / February 1969
6. 1.84 inches / January 2005
7. 1.70 inches / November 1923
7. 1.70 inches / April 1988
9. 1.64 inches / March 1978
10. 1.61 inches / November 1913

Calendar Years

Wettest Years	Driest Years
1. 4.73 inches / 2005	1. 0.00 inch / 1929
2. 4.62 inches / 1941	2. Trace / 1989
3. 4.54 inches / 1913	2. Trace / 1953
4. 4.26 inches / 1998	4. 0.15 inch / 1932
5. 4.25 inches / 2004	5. 0.26 inch / 1933
6. 4.21 inches / 1976	6. 0.32 inch / 1951*
7. 4.19 inches / 1988	7. 0.41 inch / 1917
8. 4.15 inches / 1983	8. 0.44 inch / 1924
9. 4.03 inches / 1978	9. 0.47 inch / 1955
10. 3.86 inches / 1938	10. 0.48 inch / 2002

* Missing 3 days of data in August.

Water Years (July - June)

Wettest Years	Driest Years
1. 6.44 inches / 2004-2005	1. 0.03 inch / 1918-1919
2. 6.09 inches / 1997-1998	2. 0.16 inch / 1933-1934
3. 5.78 inches / 1987-1988	3. 0.17 inch / 1931-1932
4. 5.09 inches / 1977-1978	4. 0.18 inch / 1932-1933
5. 4.52 inches / 1938-1939	5. 0.20 inch / 1928-1929
6. 3.72 inches / 1936-1937	5. 0.20 inch / 1924-1925
7. 3.64 inches / 1972-1973	7. 0.24 inch / 1993-1994
7. 3.64 inches / 1939-1940	8. 0.27 inch / 1935-1936
9. 3.57 inches / 1913-1914	9. 0.41 inch / 1955-1956
10. 3.53 inches / 1992-1993	10. 0.44 inch / 1916-1917

Monsoon Season (June 15th – September 30th)

Wettest Monsoon Seasons
1. 1.91 inches / 1936
2. 1.78 inches / 1939
3. 1.77 inches / 1997
4. 1.62 inches / 1984
5. 1.40 inches / 1911
6. 1.32 inches / 1983
7. 1.22 inches / 1950
8. 1.15 inches / 2005
9. 1.14 inches / 1977
10. 1.12 inches / 1963

Driest Monsoon Seasons									
Years With No Precipitation (0.00 inch)									
1914	1916	1921	1924	1927	1928	1929	1955	1960	1989
1993									
Years With A Trace									
1930	1935	1937	1944	1947	1953	1970	1973	1981	1995

Meteorological Winter (December – February)

Wettest Winters	Driest Winters
1. 4.41 inches / 2004-2005	1. 0.00 inch / 1990-1991**
2. 3.13 inches / 2009-2010	1. 0.00 inch / 1955-1956
3. 2.92 inches / 1997-1998	1. 0.00 inch / 1923-1924
4. 2.89 inches / 1992-1993	1. 0.00 inch / 1918-1919
5. 2.76 inches / 1994-1995*	1. 0.00 inch 1911-1912
6. 2.37 inches / 1975-1976	6. Trace / 2001-2002
7. 2.35 inches / 2000-2001	6. Trace / 1933-1934
8. 2.17 inches / 1968-1969	6. Trace / 1922-1923
9. 2.14 inches / 1987-1988	9. 0.03 inch / 1988-1989
10. 2.07 inches / 1938-1939	9. 0.03 inch / 1916-1917

*Missing all of December 1994. **Missing 2 days of data in February 1991.

Meteorological Spring (March-May)

Wettest Springs
1. 2.02 inches / 1978
2. 1.82 inches / 1988
3. 1.71 inches / 1952
4. 1.61 inches / 1980
5. 1.46 inches / 1941
6. 1.34 inches / 1939
7. 1.32 inches / 1965
8. 1.23 inches / 1983
9. 1.20 inches / 1987
10. 1.10 inches / 1912

Driest Springs									
Years With No Precipitation (0.00 inch)									
1921	1927		1929	1950		1953	1989		1997
Years With A Trace									
1923	1932	1933	1934	1951	1959	1966	1970	1984	2009
2013									

Meteorological Summer (June-August)

Wettest Summers	
1.	1.91 inches / 1936
2.	1.62 inches / 1984
3.	1.14 inches / 1977
4.	1.12 inches / 1983
5.	0.82 inch / 2013
5.	0.82 inch / 1964*
7.	0.80 inch / 2012
8.	0.80 inch / 2011
9.	0.75 inch / 1961
9.	0.75 inch / 1954

* Missing 1 day of data in August 1964

Driest Summers									
Years With No Precipitation (0.00 inch)									
1916	1921	1924	1927	1928	1929	1940	1955	1981	1989
1993					1994				
Years With A Trace									
1923	1930	1935	1937	1943	1944	1947	1948*	1951**	1953
1959		1960		1962		1970		1973	

*Missing 5 days of data in July 1948. **Missing 3 days of data in August 1951.

Meteorological Fall (September-November)

Wettest Falls	
1.	2.36 inches / 1923
2.	1.91 inches / 1913
3.	1.69 inches / 1987
4.	1.59 inches / 1997
5.	1.58 inches / 1972
5.	1.58 inches / 1939
7.	1.50 inches / 1946
8.	1.45 inches / 2004
9.	1.41 inches / 1963
10.	1.40 inches / 1911

Driest Falls							
Years With No Precipitation (0.00 inch)							
1914	1915	1924	1927	1929	1930	1956	1989
Years With A Trace							
1922	1935	1937	1942	1953	1955	1979	

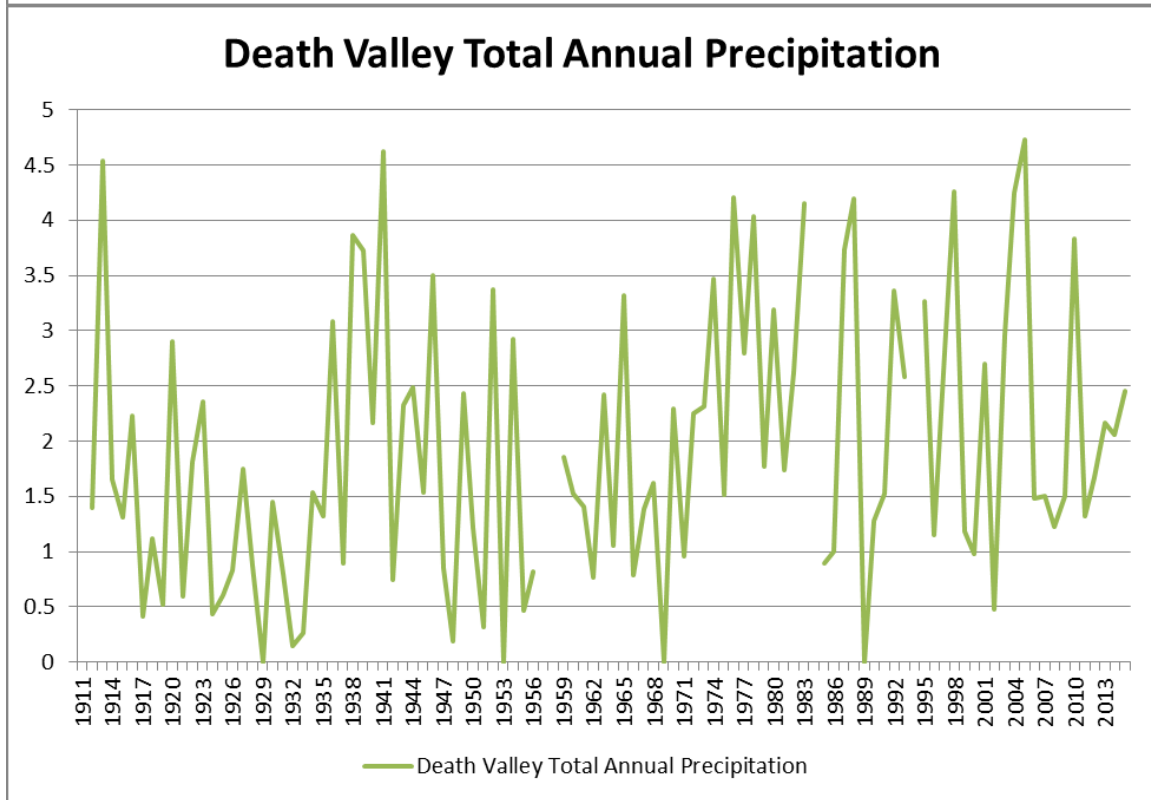
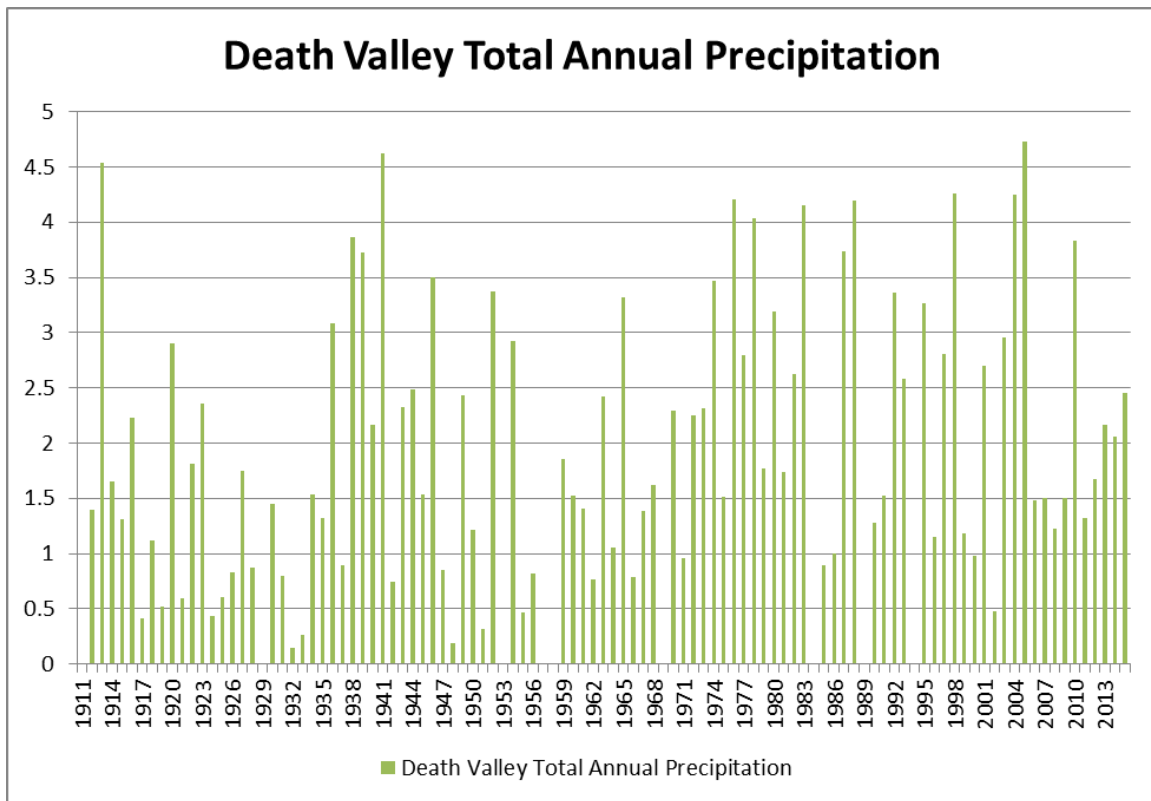
Monthly and Annual Precipitation at Death Valley

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
1911	-	-	-	-	-	-	0.00	0.00	1.40	0.00	0.00	0.00	-
1912	0.00	0.00	1.10	T	T	0.00	0.10	0.00	0.00	0.20	0.00	0.00	1.40
1913	0.01	1.90	0.10	0.00	0.01	0.00	0.60	0.01	0.30	0.00	1.61	0.00	4.54
1914	0.67	0.21	0.00	0.12	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.60	1.65
1915	1.10	0.02	0.02	0.08	0.02	0.00	0.07	0.00	0.00	0.00	0.00	0.00	1.31
1916	1.51	0.20	0.02	0.00	0.40	0.00	0.00	0.00	0.00	0.10	0.00	0.00	2.23
1917	0.03	0.00	0.00	0.01	0.30	0.00	0.06	0.00	0.01	0.00	0.00	0.00	0.41
1918	0.00	0.30	0.75	0.05	T	0.00	0.00	0.01	0.00	0.01	0.00	0.00	1.12
1919	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.20	0.30	0.52
1920	0.60	1.00	0.30	0.00	0.10	0.60	0.00	0.10	0.00	0.20	0.00	0.00	2.90
1921	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.60
1922	1.20	0.10	T	T	0.06	T	0.05	0.40	0.00	0.00	T	0.00	1.81
1923	0.00	T	T	T	0.00	0.00	0.00	T	0.16	0.50	1.70	0.00	2.36
1924	0.00	0.00	0.15	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.44
1925	0.00	0.00	0.00	0.11	0.00	T	0.36	0.10	0.00	0.04	0.00	0.00	0.61
1926	T	0.10	0.00	0.28	0.00	T	0.00	0.10	0.00	0.35	T	T	0.83
1927	0.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	1.75
1928	0.00	0.37	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.87
1929	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1930	0.40	0.00	0.65	0.00	0.40	0.00	0.00	T	0.00	0.00	0.00	0.00	1.45
1931	T	0.57	0.00	0.03	0.00	0.10	0.00	0.05	0.00	T	0.02	0.03	0.80
1932	T	0.05	0.00	0.00	T	0.02	0.00	0.00	0.05	0.02	0.00	0.01	0.15
1933	0.10	0.00	0.00	0.00	T	T	0.01	0.07	0.00	T	0.08	T	0.26
1934	T	T	T	0.00	T	T	0.64	T	T	0.55	T	0.34	1.53
1935	0.27	0.75	0.09	0.00	0.10	0.00	T	T	T	T	T	0.11	1.32
1936	0.00	0.13	0.03	0.00	0.00	T	0.56	1.35	0.00	0.36	0.00	0.65	3.08
1937	0.22	0.08	0.27	0.23	T	T	T	0.00	T	T	T	0.09	0.89
1938	0.03	0.36	0.55	0.16	0.14	T	0.27	0.43	0.38	0.03	T	1.51	3.86
1939	0.33	0.23	0.51	0.69	0.14	0.00	T	0.21	1.57	T	0.01	0.04	3.73
1940	0.03	1.20	T	0.58	T	0.00	0.00	0.00	0.02	T	0.00	0.34	2.17
1941	0.82	0.74	0.40	0.58	0.48	0.01	T	0.52	0.00	0.45	0.16	0.46	4.62
1942	T	0.01	0.15	0.18	T	0.00	0.00	0.40	0.00	T	0.00	0.01	0.75
1943	0.29	0.03	0.36	0.55	0.00	T	T	0.00	0.05	0.20	T	0.85	2.33
1944	0.05	1.12	0.15	0.11	0.05	T	0.00	0.00	T	T	1.01	0.00	2.49
1945	0.00	0.15	0.06	T	0.02	T	T	0.39	0.00	0.38	0.00	0.54	1.54
1946	0.00	0.01	0.13	0.03	0.00	0.00	T	0.65	T	T	1.50	1.18	3.50
1947	0.00	T	0.03	0.10	T	0.00	0.00	T	0.00	0.18	T	0.54	0.85
1948	0.00	0.00	M	0.04	0.11	T	0.00*	0.00	0.00	0.04	0.00	0.00	M
1949	0.41	0.85	0.41	T	0.47	0.10	0.00	0.14	M	0.00	0.00	0.05	M
1950	0.00	0.00	0.00	0.00	0.00	0.00	0.70*	0.00	0.52	0.00	0.00	0.00	1.22**
1951	0.00	0.05	0.00	T	0.00	0.00	T	0.00*	0.00	0.06	0.04	0.17	0.32**
1952	0.59	0.00	1.32	0.39	0.00	0.00	0.13	0.00	0.00	0.00	0.63	0.31	3.37
1953	0.00	0.00	0.00	0.00	0.00	0.00	T	0.00	0.00	T	T	0.00	T
1954	1.11	0.00	0.31	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.75	0.00	2.92
1955	0.26	T	0.00	0.13	0.08	0.00	0.00	0.00	0.00	0.00	T	0.00	0.47
1956	0.00	0.00	0.00	0.41	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.82
1957	0.45	0.00*	0.00	0.37	0.41	0.13	0.00	0.00	M	M	M	M	M
1958	M	M	0.22	0.30	0.00	0.00	0.08	0.06	0.15	0.16	0.40	0.00	M
1959	0.21	0.36	T	0.00	0.00	0.00	0.00	T	0.52	0.00	0.00	0.77	1.86

1960	0.78	0.30	0.03	0.00	0.00	T	0.00	0.00	0.00	0.19	0.22*	0.00	1.52**
1961	0.14	T	T	0.09	0.01	T	T	0.75	0.00	0.01	0.25	0.16	1.41
1962	T	0.39	0.11	0.00	T	0.00	T	0.00	0.19	T	0.00	0.08	0.77
1963	0.01	0.65	0.18	0.01	T	0.16	0.00	0.00	1.12	0.01	0.28	0.00	2.42
1964	0.03	0.02	0.03	0.01	0.01	0.00	0.68	0.14*	0.00	0.02	0.10	0.01	1.05**
1965	0.09	0.00	0.05	1.27	0.00	T	0.21	0.27	0.00	0.00	0.86	0.57	3.32
1966	0.08	0.04	0.00	T	0.00	T	0.42	0.10	0.05	0.00	0.02	0.08	0.79
1967	T	0.00	T	0.10	0.00	0.02	0.13	0.00	0.42	0.00	0.68	0.04	1.39
1968	0.00	1.16	T	0.09	0.00	0.26	0.04	0.02	0.00	0.05	0.00	T	1.62
1969	0.30	1.87	0.25	0.00	0.03	0.10	0.50	0.00	0.00	0.00	0.37	0.00	3.42
1970	T	1.36	T	T	0.00	0.00	0.00	T	0.00	0.00	0.81	0.12	2.29
1971	0.00	0.07	0.02	0.02	0.15	0.00	0.01	0.01	0.05	T	T	0.63	0.96
1972	0.00	0.00	0.00	0.09	0.00	0.53	0.00	0.05	T	1.09	0.49	T	2.25
1973	0.34	1.00	0.57	0.09	0.01	T	0.00	T	0.00	0.18	0.03	0.09	2.31
1974	1.20	T	0.40	0.00	T	0.00	0.68	T	0.00	0.82	T	0.37	3.47
1975	T	T	0.41	0.33	T	T	0.32	0.01	0.35	0.04	0.05	T	1.51
1976	0.00	2.37	0.03	0.12	0.15	T	0.20	0.00	0.87	0.47	0.00	0.00	4.21
1977	0.16	0.00	0.08	0.00	0.96	0.00	0.00	1.14	0.00	0.00	0.02	0.44	2.80
1978	0.70	0.77	1.64	0.04	0.34	0.00	0.00	0.03	0.39	0.05	0.00	0.07	4.03
1979	0.95	0.21	0.45	0.00	0.00	0.00	0.15	0.01	T	T	0.00	0.00	1.77
1980	0.35	0.95	0.81	0.40	0.40	0.02	0.00	0.00	0.26	0.00	0.00	0.00	3.19
1981	0.08	0.02	0.66	0.00	0.00	0.00	0.00	0.00	T	0.18	0.80	0.00	1.74
1982	0.14	0.35	1.01	T	0.02	0.00	0.36	0.06	0.09	0.00	0.19	0.40	2.62
1983	0.54	0.50	1.14	0.08	0.01	0.00	T	1.12	0.20	0.01	0.01	0.54	4.15
1984	0.00	T	T	0.00	0.00	0.00	0.42	1.20	0.00	0.02	0.00	M	M
1985	0.05	0.00	0.00	0.00	0.26	0.00	0.13	0.00	0.08	0.00	0.28	0.09	0.89
1986	0.18	0.08	0.15	0.02	0.08	0.00	0.01	0.17	T	0.09	0.22	T	1.00
1987	0.21	0.06	1.13	0.04	0.03	0.00	0.01	0.00	0.00	0.24	1.45	0.57	3.74
1988	1.20	0.37	0.12	1.70	T	0.12	0.00	0.22	0.41	0.00	0.02	0.03	4.19
1989	T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	T
1990	0.37	0.10	0.05	0.00	0.01	0.04	0.15	T	0.56	0.00	T	0.00	1.28
1991	0.00	0.00*	1.00	0.00	0.06	0.00	0.19	0.00	0.02	0.00	0.00	0.25	1.52**
1992	0.53	1.03	0.75	T	0.01	0.00	0.02	0.00	0.00	0.15	0.00	0.87	3.36
1993	0.67	1.35	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06	2.58
1994	0.04	0.05	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	M	M
1995	2.59	0.17	0.31	0.00	0.07	0.02	0.00	T	0.00	0.04	0.00	0.07	3.27
1996	0.00	0.33	0.15	0.00	0.12	0.00	0.02	0.00	0.00	0.42	0.00	0.11	1.15
1997	T	0.01	0.00	0.00	0.00	0.40	0.29	T	1.48	0.00	0.11	0.52	2.81
1998	0.09	2.31	0.74	0.17	0.16	0.22	0.02	0.04	0.45	0.06	0.00	0.00	4.26
1999	0.14	0.00	0.00	0.46	0.07	0.00	0.42	0.00	0.09	0.00	0.00	0.00	1.18
2000	T	0.43	0.29	T	T	T	0.00	0.24	0.00	0.02	0.00	0.00	0.98
2001	1.03	1.32	0.06	0.02	0.01	0.00	0.25	0.00	0.00	0.00	0.01	T	2.70
2002	0.00	0.00	0.20	0.00	0.00	0.00	0.06	0.00	0.00	0.05	0.02	0.15	0.48
2003	T	1.16	0.05	0.63	0.01	0.00	0.05	0.15	0.00	0.00	0.67	0.24	2.96
2004	0.00	0.85	0.04	0.11	0.00	0.16	0.00	0.33	0.53	0.14	0.78	1.31	4.25
2005	1.84	1.26	0.20	0.05	T	0.00	0.00	0.39	0.76	0.22	0.01	0.00	4.73
2006	0.06	0.04	0.24	0.24	0.01	T	0.11	0.00	0.52	0.20	0.00	0.06	1.48
2007	0.02	0.14	0.08	0.07	0.00	0.00	T	0.01	0.63	0.00	T	0.55	1.50
2008	0.38	T	0.00	0.00	0.01	0.00	0.04	0.00	0.00	0.15	0.61	0.04	1.23
2009	0.03	1.36	0.00	0.00	T	T	0.02	0.02	0.00	T	0.03	0.04	1.50
2010	1.56	1.53	0.02	0.09	T	0.00	0.01	T	0.00	0.13	0.02	0.47	3.83
2011	0.08	0.14	0.10	0.00	0.07	0.00	0.27	0.53	0.09	0.00	0.01	0.03	1.32
2012	0.02	0.01	0.00	0.23	T	0.00	0.06	0.74	0.00	0.59	T	0.02	1.67

2013	0.17	0.00	0.57	T	0.00	0.00	0.75	0.07	0.23	0.00	0.38	T	2.17
2014	0.00	T	0.36	0.11	0.02	0.00	0.05	0.15	0.76	0.00	0.02	0.59	2.06
2015	0.42	0.26	0.16	0.00	0.06	0.00	0.25	T	0.00	1.30	T	T	2.45

* Contains 1-5 days of missing data. ** Total contains a month with 1-5 days of missing data.
M = a month missing more than 5 days of data or a year with at least one month of missing data.
T = trace



Graphs of total annual precipitation at Death Valley, California.

Number of Days (Precipitation) at Death Valley

With A Trace or More

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	13 1978	12 1998	12 1973	10 1999	7 1957& 1977	6 1972	10 1984	10 1983	7 1932& 1976	9 1974	7 1972	13 2010	58 1941
Normal	3	4	3	2	1	0	2	1	1	1	1	2	22

Normals above are based on the period from 1981-2010.

With 0.01 inch or More

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	11 1978& 1995	10 1998	9 1973	8 1999	7 1977	3 1972& 1998	5 1984	7 1983	6 1976	6 1974	6 1965 1967& 1972	8 2010	42 1941
Normal	2.5	2.8	2.3	1.1	0.8	0.4	1.0	0.9	1.1	1.0	1.2	1.9	17.0

Normals above are based on the period from 1981-2010 and are calculated by NCEI.

With 0.10 inch or More

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	6 1995	6 1998	5 1952	5 1965	3 1977	3 1972	3 1913& 1936	4 1983& 2012	3 1963& 1990	5 2015	4 1965& 1987	4 1938	15 1965
Normal	0.9	1.2	0.8	0.2	0.1	0.1	0.4	0.4	0.5	0.2	0.4	0.6	5.8

Normals above are based on the period from 1981-2010 and are calculated by NCEI.

With 0.25 inch or More

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	4 1995	4 1969& 1976	3 1987	3 1965	1 1916 1917 1930 1941 1949 1977 1978 1980& 1985	1 1920 1968 1972& 1997	2 1964& 2013	2 1961 1983 1984& 2011	3 1963	2 1972 1974& 2015	3 1987	2 1914 1938 1946& 1992	9 1941
Normal	0.6	0.7	0.4	0.1	0	*	0.1	0.2	0.3	*	0.2	0.3	2.9

Normals above are based on the period from 1981-2010.

*Happened once in a 30 year period.

With 0.50 inch or More

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	3 1995	3 1913	1 1912 1952 1978 1980 1982 1983 1991 1998& 2013	1 1940 1988& 2003	1 1977	1 1920	1 1934 1950 1954 1969& 1974	2 1984	2 1939	1 1923 1934 1972 2012& 2015	2 1913 1944& 1946	1 1938 1943 1946 1983 1992 2004 2007 &2014	5 1913
Normal	0.2	0.3	0.1	0.1	0	*	0	0.1	0.2	0	0.1	0.1	1.2

Normals above are based on the period from 1981-2010 and are calculated by NCEI.

*Happened once in a 30 year period.

^And in previous years.

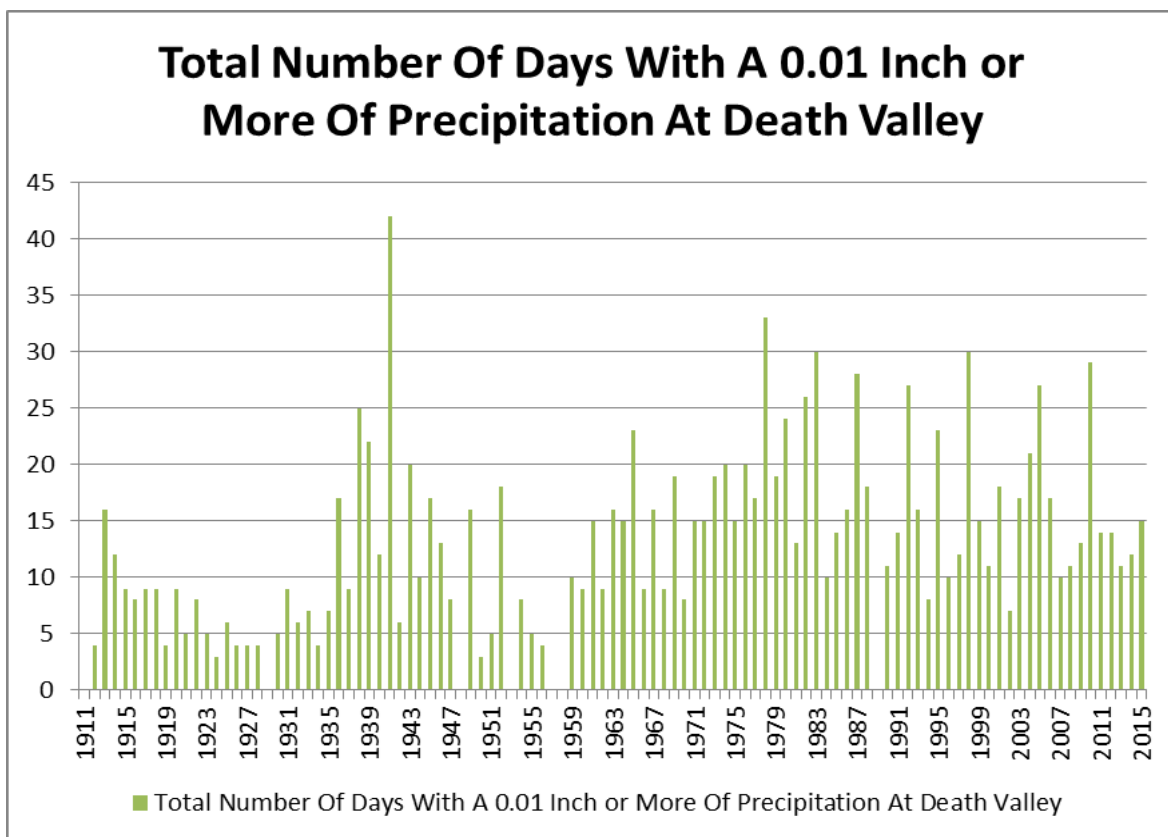
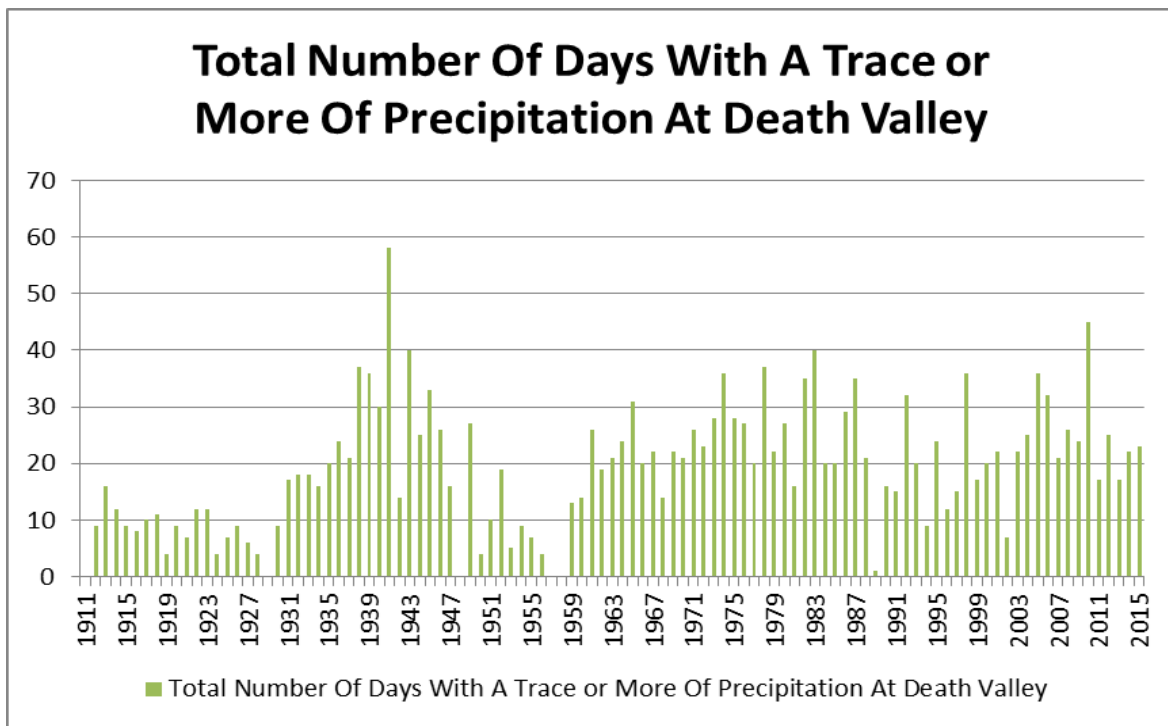
With 1.00 inch or More

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Greatest	1 1922& 2005	1 1927 &1998	1 1978	1 1988	0	0	0	1 1936	1 1911& 1997	0	1 1923	1 2004	1 1911 1922 1923 1927 1936 1978 1988 1997 1998 2004& 2005
Normal	0	0	0	*	0	0	0	0	*	0	0	*	*

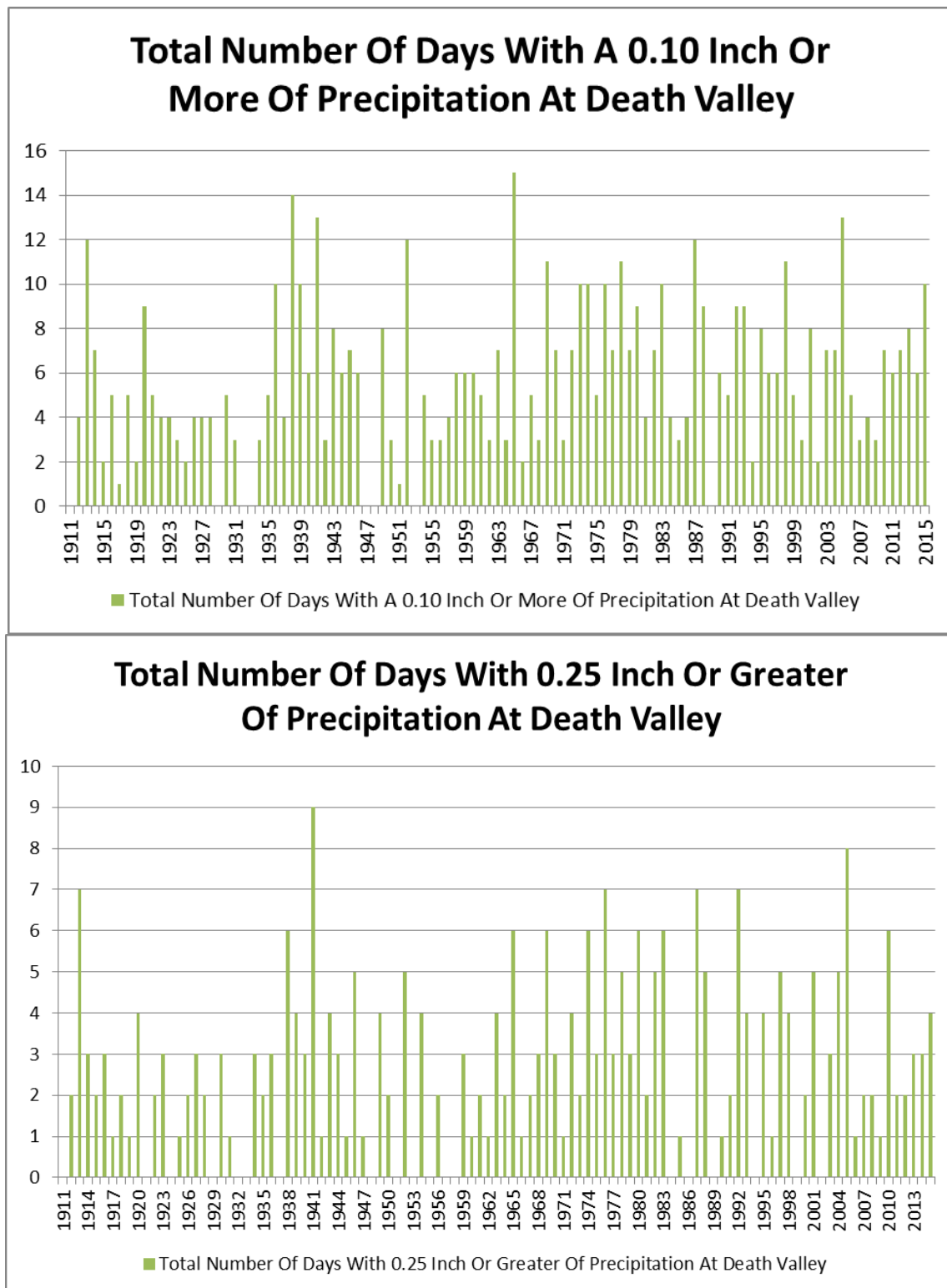
Normals above are based on the period from 1981-2010 and are calculated by NCEI.

*Happened once in a 30 year period.

^And in previous years.



Graphs showing the total number of days by year with a trace or more of precipitation (top) and 0.01 inch or more of precipitation (bottom) at Death Valley, CA. Note 1948, 1957 and 1958 are not shown due to excessive missing data.



Graphs showing the total number of days by year with 0.10 inch or more of precipitation (top) and 0.25 inch or more of precipitation (bottom) at Death Valley, CA. Note 1948, 1957 and 1958 are not shown due to excessive missing data.

Consecutive Days Records For Precipitation*

Consecutive Days With A Trace or More
11 days from December 17, 2010 through December 27, 2010
6 days from January 2, 1992 through January 7, 1992
6 days from August 15, 1983 through August 20, 1983
6 days from February 14, 1980 through February 19, 1980
6 days from January 4, 1974 through 9, 1974
6 days from January 30, 1940 through February 4, 1940
6 days from February 27, 1938 through March 4, 1938
6 days from September 25, 1932 through September 30, 1932

Consecutive Days With Measurable Precipitation (0.01 or More)
6 days from February 14, 1980 through February 19, 1980
5 days from February 10, 1992 through February 14, 1992
5 days from January 15, 1979 through January 19, 1979
5 days from September 29, 1976 through October 3, 1976
5 days from February 6, 1976 through February 10, 1976
5 days from January 4, 1974 through January 8, 1974
5 days from February 20, 1941 through February 24, 1941

Consecutive Dry Days
399 days from December 4, 1928 through January 6, 1930
378 days from January 5, 1989 through January 17, 1990
299 days from February 16, 1927 through November 11, 1927
272 days from January 24, 1921 through October 22, 1921
236 days from April 24, 1924 through December 15, 1924
229 days from March 29, 1993 through November 12, 1993
221 days from March 4, 1928 through October 10, 1928
207 days from December 11, 1949 through July 5, 1950
194 days from December 30, 1952 through July 11, 1953
192 days from June 3, 1914 through December 11, 1914

Consecutive Days Without Measurable Precipitation
401 days from December 4, 1928 through January 8, 1930
385 days from December 29, 1988 through January 17, 1990
385 days from December 30, 1952 through January 18, 1954
380 days from August 29, 1922 through September 12, 1923
305 days from June 1, 1955 through May 30, 1955
300 days from February 15, 1927 through December 11, 1927

* Based on observational period day, which is not a calendar day.

Snow

Observations of snow are taken as part of collecting routine weather observations at Death Valley. The total amount of snow that has fallen is reported once a day at the time of observation by the observer on duty. This observation time is the same as when temperature, liquid precipitation and evaporation readings are taken. Therefore the snow amounts listed for each day represent the observation day ending at the time the observation was taken.

Daily Snow Amounts

The following are all* the instances of snow at Death Valley and the observation date that snow was reported.

0.5 inch – January 29, 1922
Trace – January 9, 1949
Trace – January 11, 1949
Trace – January 22, 1962
Trace – January 4, 1974
Trace – January 5, 1974

*A trace of snow on January 2, 1949 is counted as snow in the official records but is listed as hail on the observation form.

Greatest Seasonal Totals

0.5 inch – 1921-1922
Trace – 1948-1949
Trace – 1961-1962
Trace – 1973-1974

Evaporation

Evaporation readings are made at Death Valley once a day at the time of observation along with the collection of maximum and minimum air temperatures and precipitation for the observation period. Wind movement and readings of the high and low water temperature are also collected as part of the evaporation reading.

Total evaporation has always exceeded 100 inches a year at Death Valley since records started at Furnace Creek. However, a marked decline in the total evaporation can be seen since the start of records. The highest evaporation occurs during the summer months when air temperatures are the highest along with the sun angle while the lowest evaporation takes place during the months of December and January when the sun angle is lowest and air temperatures are usually the coldest. The highest total evaporation was in 1964 when 177.12 inches was recorded. The lowest total was 116.66 inches in 1998. The highest daily evaporation rate reported was on May 18, 1961 when 1.95 inches of water evaporated. However, some caution should be taken with respect to this value as the previous two days that month had no evaporation reading reported.

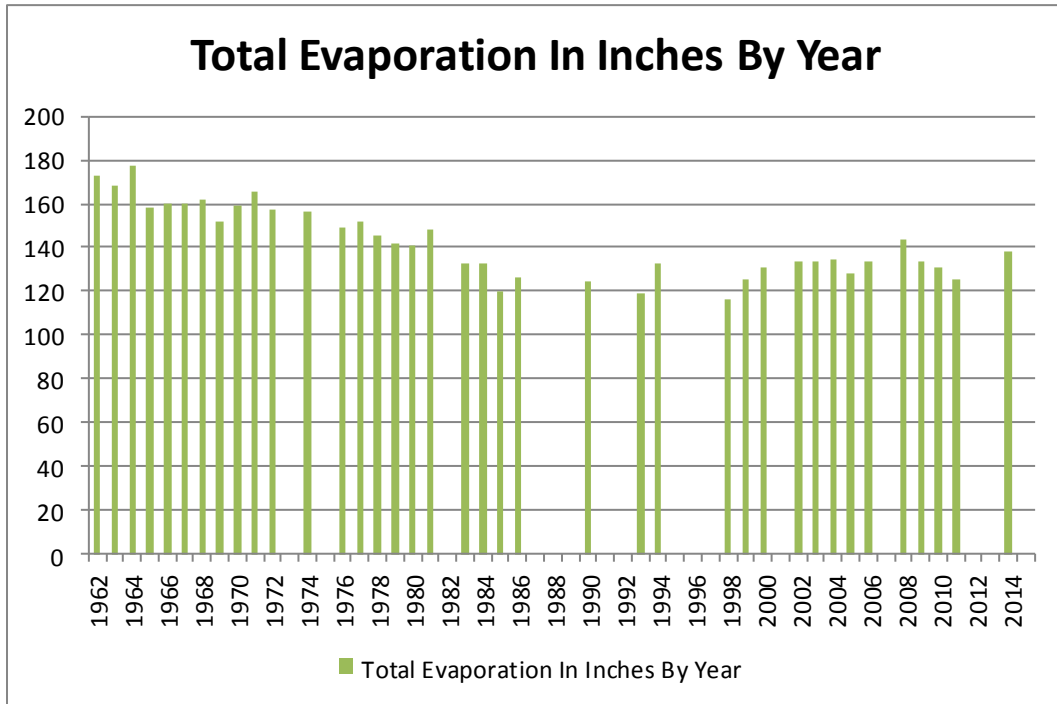
Values listed in the total evaporation by month and year were in some cases adjusted by the former National Climatic Data Center to the entire month where a few days of data were missing. Starting in 2011, however, the former National Climatic Data Center (now NOAA's National Centers for Environmental Information) discontinued this practice as a part of a standard policy to no longer adjust observer totals. Therefore the totals listed in 2011 are the total of the observed values listed by the observers on the B-92 form used to report evaporation.

Evaporation records were discontinued at Death Valley on November 3, 2015.

Total Evaporation In Inches at Death Valley By Month and Year

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
1961	-	-	-	-	22.82	25.17	26.39	21.51	17.55	11.60	6.41	3.34^	-
1962	6.28	5.81	9.71	16.52	20.04	23.26	24.79	25.50	17.64	13.43	6.04	3.62^	172.64
1963	4.19	6.21	11.36	14.76	21.41	22.20	27.78	23.86	14.82	11.25	6.54	3.85	168.23
1964	5.52	9.45	12.36	15.69	20.43	23.43	26.69	23.27	18.28	10.99	6.35	4.66	177.12
1965	5.29	7.76	10.90	12.87	19.75	20.69	24.73	20.55	17.56^	10.56	4.84	2.30	157.80
1966	3.55^	5.74	9.45	15.22^	20.50^	21.61	26.15^	19.88	16.55	10.52	6.23	4.51	159.91
1967	4.96	7.96	12.55	12.81^	18.63	20.82	23.24	22.47	15.45	12.67	3.57	4.79	159.92
1968	4.72	4.80	11.76	15.48	18.85	21.16	23.66	21.61	17.35	10.90	7.34	4.61	162.24
1969	4.07	3.65	10.91	15.79	18.81	18.95	21.72	21.77^	16.28	10.28	5.44	4.26	151.93
1970	3.91	6.45	10.03^	13.64	19.71	22.01	23.20	21.69	17.11	11.58	6.34	3.12	158.79
1971	4.77	7.50^	10.86	13.17	17.63	21.57	24.25	22.74	17.81	11.96	7.94	5.25^	165.45
1972	5.23	5.78	12.74	15.22	19.07	20.32	24.10	20.47	15.06	9.57	5.02	4.97	157.55
1973	M	5.43^	8.07	15.48	17.91^	21.31	23.65	20.59	15.88	12.28	6.63	5.43^	M
1974	3.92	7.33	9.51	15.27	19.62	22.68	22.63	19.61	16.63	9.93	5.18	4.13	156.44
1975	4.85	M	10.76^	13.20	17.84	21.47	24.08	21.28	14.93	12.33	7.66	5.70	M
1976	5.15	5.49	10.67	12.99	18.54	21.19	21.86	19.77	12.53	10.33	6.53	4.05	149.10
1977	3.95	6.87	10.88	14.77	14.76	19.66	23.93	20.36^	15.14	10.51	7.28	3.70	151.81
1978	2.52	4.42	7.00	11.15	17.57	21.21	21.90	20.77	14.97	12.00	7.46	4.71	145.68
1979	3.38	4.48	8.71	13.27	18.16	19.87	20.89	17.63	14.20^	11.36^	5.90	4.09	141.94
1980	4.24	5.95^	8.73	11.83	14.37	19.83	21.17^	19.65	15.10	10.55	6.07	3.70	141.19
1981	3.97	5.91	8.50	14.36^	17.00^	20.28^	22.47	18.90	15.98	12.20	6.48	2.57^	148.62
1982	M	6.31^	M	11.85	16.32	17.95	18.08^	17.10	12.64	9.62	M	4.45^	M
1983	4.26^	4.59	7.68^	12.64	16.76^	18.90	21.02	14.42	14.48^	8.27^	6.54^	3.14	132.70
1984	4.75	6.36^	10.76	13.14	17.20	18.66	16.04	16.06^	12.31	9.21	5.78^	2.56^	132.83
1985	4.07	5.09^	9.33	12.58	15.14	15.50	15.27	16.44^	11.22	8.11^	4.15	2.83^	119.73
1986	3.18	5.00	8.36^	11.29^	13.52^	19.22^	17.77	17.68	13.00	8.08^	6.40^	2.41	125.91
1987	3.60	5.98^	8.20^	13.10^	11.70^	M	M	M	M	M	M	M	M
1988	M	M	8.60	M	14.37^	14.92	18.11	15.42	12.76	9.30	5.09	5.00	M
1989	M	M	10.82	15.07^	15.61^	17.81	19.24	17.72	11.59	8.19	4.73^	3.43^	M
1990	2.73	4.83	8.10	11.13	15.84	17.10	18.85^	17.30^	11.61	8.62	5.50	3.11^	124.72
1991	4.99^	5.36	8.00^	11.70	14.48^	18.07	M	17.35	11.97	9.14	5.26	M	M
1992	M	4.29	5.60	11.08	15.77	17.66	19.00	17.29	12.28	7.77	4.86^	M	M
1993	1.06^	2.71^	6.23	10.98	15.76	16.11	19.54	18.00	12.42	8.19	4.88^	2.75^	118.63
1994	3.46^	4.59^	10.01	11.37	15.14	19.27	21.21	19.75	12.98	7.96	4.52	2.25	132.51
1995	M	4.25	7.84^	11.43	12.16	16.33	19.79	18.86	13.61	8.35	4.36	2.79	M
1996	M	4.46	7.99	12.88	15.31	19.36	20.65	17.75	13.50	8.97^	4.02	2.81	M
1997	3.73	6.04	8.49	11.58	15.55	18.44	18.65	18.80	13.16	8.93	3.26	M	M
1998	2.62	2.49	6.34^	9.94	13.35	15.03	19.49	18.39^	12.16	7.89	3.95	5.01^	116.66
1999	3.51	4.77	8.57	9.41	14.21	17.94^	18.74	18.83	12.84	8.40^	4.25	4.11	125.58
2000	3.14	4.36	8.23^	12.36	17.19	19.70^	20.69	17.48	12.58	8.18^	3.98	2.65	130.54
2001	M	M	7.23^	10.77	15.71^	14.04	15.55	14.42	10.51	6.31	M	2.93^	M
2002	3.70	4.83	8.02	8.21	16.29	19.44	22.03	18.91	15.72^	8.08	6.02	2.73	133.98
2003	3.23	5.15	9.01	11.20	15.21	19.66	21.27	18.20	14.56	10.14	4.14	2.19	133.96
2004	3.11	4.79	9.37	12.53	17.31	19.45	21.63	18.54	12.44	8.91	4.91	1.60	134.59
2005	3.29	4.38	7.90	11.35^	15.50	18.88	21.50	17.19^	12.96	8.44	4.44	2.72^	128.55
2006	3.83	4.87	7.00*	11.03	15.62	19.09	21.09	19.39	14.85	8.71	4.95	3.51	133.94
2007	4.15	5.33	8.75*	12.27	18.19	M	22.64	20.62	14.91	9.38	5.95	3.28	M
2008	3.93	5.61	9.93	13.55	15.92	19.23	22.36	20.51	15.02	9.36	4.71	3.14	143.27
2009	4.06	3.68	9.17	12.42	16.42	17.30	19.65	18.36	14.59	9.28	5.05	3.37^	133.35
2010	2.61^	3.56^	8.30	11.48	15.66	19.56^	19.17	21.48	13.30^	7.82	5.79^	2.41^	131.14
2011	3.10	5.68	8.49	12.66	16.05	20.40	18.30	12.50	9.97	9.93	4.38	4.01	125.47
2012	3.61	1.05*	M	12.70	15.10*	19.40*	14.00*	17.60	13.60*	8.06*	4.69	3.44	M
2013	3.79	5.64	8.10	12.42	17.51	17.60	19.61	19.33	16.02	M	4.65	4.56	M
2014	3.89	4.95	9.11	13.20	16.25	20.25	21.44	18.22	14.59	9.65	4.88	1.97	138.40
2015	3.39	5.02	8.82	12.58	15.44	19.24	18.20	19.50	16.30	6.46	M	M	M

^Value adjusted to full month by NCDC. *Contains missing data.



Total yearly evaporation in inches by year at Death Valley, California.

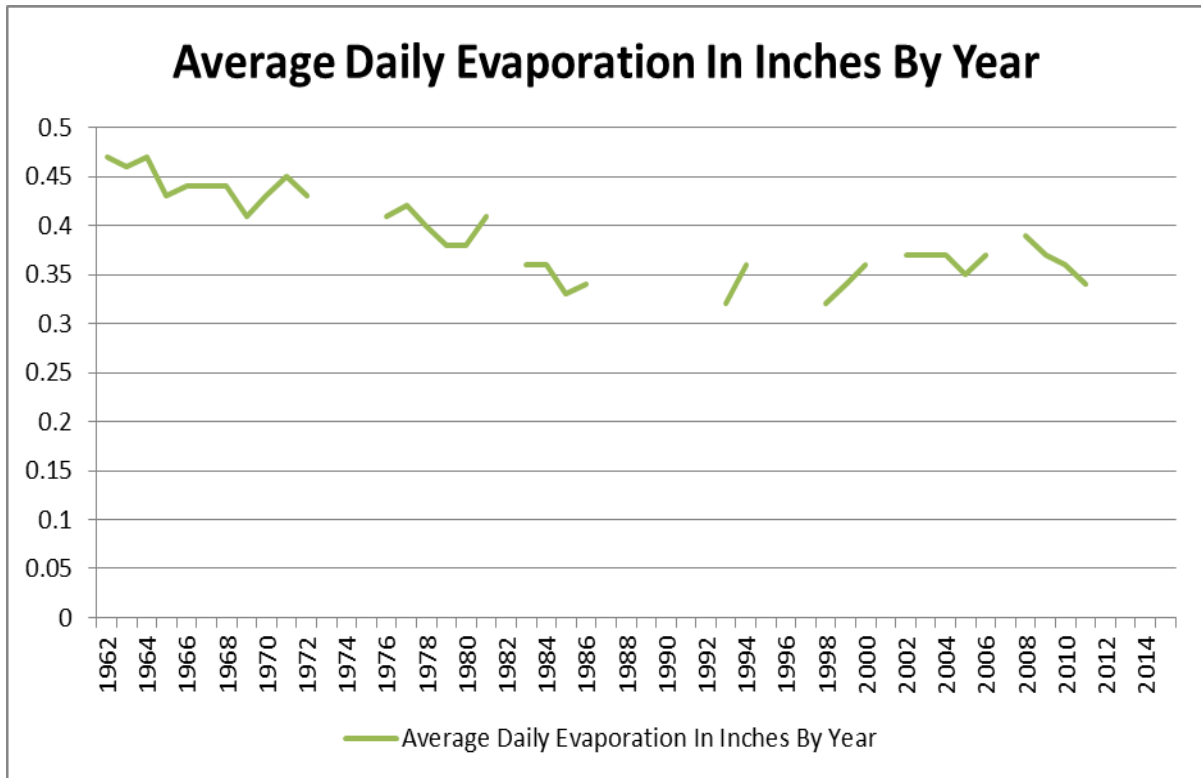
Average Daily Evaporation In Inches at Death Valley By Month and Year

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
1961	-	-	-	-	0.74*	0.84	0.85	0.69	0.59	0.37	0.21	0.11*	-
1962	0.20	0.21	0.31	0.55	0.65	0.78	0.80	0.82	0.59	0.43	0.20	0.12*	0.47**
1963	0.14	0.22	0.37	0.49	0.69	0.74	0.90	0.77	0.49	0.36	0.21	0.12	0.46
1964	0.18	0.16	0.40	0.52	0.68	0.78	0.86	0.75	0.61	0.35	0.21	0.15	0.47
1965	0.17	0.28	0.35	0.43	0.64	0.69	0.80	0.66	0.59*	0.34	0.16	0.07	0.43**
1966	0.11*	0.21	0.30	0.51*	0.66*	0.72	0.87*	0.64	0.55	0.34	0.21	0.15	0.44**
1967	0.16	0.28	0.40	0.43*	0.60	0.69	0.75	0.72	0.52	0.41	0.12	0.15	0.44**
1968	0.15	0.17	0.38	0.52	0.61	0.71	0.75	0.70	0.58	0.35	0.24	0.15	0.44
1969	0.13	0.13	0.35	0.53	0.61	0.63	0.70	0.70*	0.54	0.33	0.18	0.14	0.41**
1970	0.13	0.23	0.32*	0.45	0.64	0.73	0.75	0.70	0.57	0.37	0.21	0.10	0.43**
1971	0.15	0.27*	0.35	0.44	0.57	0.72	0.78	0.73	0.59	0.39	0.26	0.17*	0.45**
1972	0.17	0.20	0.41	0.51	0.62	0.68	0.78	0.66	0.50	0.31	0.17	0.16	0.43
1973	M	0.19*	0.26	0.51	0.58*	0.71	0.76	0.66	0.53	0.40	0.22	0.18*	M
1974	0.13	0.26	0.31	0.51	0.63	0.76	0.73	0.63	0.55	0.32	0.17	0.13	0.43
1975	0.16	M	0.35*	0.44	0.58	0.72	0.78	0.69	0.50	0.40	0.26	0.18	M
1976	0.17	0.19	0.34	0.43	0.60	0.71	0.71	0.64	0.42	0.33	0.22	0.13	0.41
1977	0.13	0.25	0.35	0.49	0.48	0.66	0.77	0.77*	0.50	0.33	0.24	0.12	0.42**
1978	0.08	0.16	0.23	0.37	0.57	0.71	0.71	0.67	0.50	0.39	0.25	0.15	0.40
1979	0.11	0.16	0.28	0.44	0.59	0.66	0.67	0.57	0.47*	0.37*	0.20	0.14	0.38**
1980	0.14	0.21*	0.28	0.39	0.46	0.66	0.68*	0.63	0.50	0.34	0.20	0.12	0.38**
1981	0.13	0.21	0.27	0.48*	0.55*	0.68*	0.72	0.61	0.53	0.39	0.22	0.08*	0.41**
1982	M	0.22*	M	0.40	0.53	0.60	0.58*	0.55	0.42	0.31	M	0.14*	M
1983	0.13*	0.16	0.25*	0.42	0.54	0.63	0.68	0.47	0.48*	0.27*	0.22*	0.10	0.36**
1984	0.15	0.22*	0.35	0.44	0.55	0.62	0.52*	0.52	0.41	0.30	0.19*	0.09*	0.36**
1985	0.13	0.18*	0.30	0.42	0.49	0.52	0.49	0.53*	0.38	0.26*	0.14	0.09*	0.33**
1986	0.10	0.18	0.27*	0.38*	0.44*	0.64*	0.57	0.57	0.43	0.26*	0.21*	0.07	0.34**
1987	0.11	0.21*	0.26*	0.44*	0.39*	M	M	M	M	M	M	M	M
1988	M	M	0.28*	M	0.46*	0.50*	0.58	0.50	0.43	0.30	0.17	0.16	M
1989	M	M	0.35	0.50*	0.50*	0.59	0.62	0.57	0.39	0.26	0.16*	0.11*	M
1990	0.09	0.17	0.26	0.37	0.51	0.57	0.61*	0.56*	0.39	0.28	0.18	0.14*	0.34**
1991	0.16*	0.19	0.26*	0.39	0.47*	0.60	M	0.56	0.40	0.29	0.18	M	M
1992	M	0.15	0.18	0.37	0.51	0.59	0.61	0.56	0.41	0.25	0.16*	M	M
1993	0.03*	0.10*	0.20	0.21	0.51	0.54	0.63	0.58	0.41	0.26	0.16*	0.16*	0.32**
1994	0.11*	0.16*	0.32	0.38	0.49*	0.64	0.68	0.64	0.43	0.26	0.15	0.07	0.36**
1995	M	0.15	0.25*	0.38	0.39	0.54	0.64	0.61	0.45	0.27	0.15	0.09	M
1996	M	0.15	0.26	0.43	0.49	0.65	0.67	0.57	0.45	0.29*	0.13	0.09	M
1997	0.12	0.22	0.27	0.39	0.39	0.50	0.61	0.60	0.44	0.29	0.11	M	M
1998	0.08	0.09	0.20*	0.33	0.43	0.50	0.63	0.59*	0.41	0.25	0.13	0.16*	0.32**
1999	0.11	0.17	0.27	0.31	0.46	0.60*	0.58*	0.61	0.43	0.28*	0.14	0.13	0.34**
2000	0.10	0.15	0.27*	0.41	0.55	0.66*	0.67*	0.56	0.42	0.26*	0.13	0.09	0.36**
2001	M	M	0.23*	0.36	0.51*	0.47	0.50	0.47	0.35	0.20	M	0.09*	M
2002	0.12	0.17	0.26	0.27	0.53	0.65	0.71	0.61	0.52*	0.26	0.20	0.09	0.37**
2003	0.10	0.18	0.29	0.37	0.49	0.66	0.69	0.59	0.49	0.33	0.14	0.07	0.37
2004	0.10	0.17	0.30	0.42	0.55	0.65	0.70	0.60	0.41	0.29	0.16	0.05	0.37
2005	0.11	0.16	0.25	0.38*	0.50	0.63	0.69	0.55*	0.43	0.27	0.15	0.09*	0.35**
2006	0.12	0.17	0.24*	0.37	0.50	0.64	0.68	0.63	0.50	0.28	0.17	0.11	0.37**
2007	0.13	0.19	0.30*	0.41	0.59	M	0.73	0.66	0.50	0.30	0.20	0.11	M
2008	0.13	0.19	0.32	0.45	0.51	0.64	0.72	0.66	0.50	0.30	0.16	0.10	0.39
2009	0.13	0.13	0.30	0.41	0.53	0.58	0.64	0.59	0.49	0.30	0.17	0.11*	0.37**
2010	0.08*	0.13*	0.27	0.38	0.51	0.65*	0.62	0.69	0.44*	0.25	0.19*	0.08*	0.36**
2011	0.10	0.20	0.27	0.42	0.52	0.68	0.59	0.40	0.33	0.32	0.15	0.13	0.34
2012	0.12	0.04*	M	0.42	0.50*	0.72*	0.56*	0.57	0.50*	0.28*	0.16	0.11	M
2013	0.12	0.20	0.30	0.40	0.60	0.68	0.70	0.60	0.23	M	0.20	0.10	M
2014	0.10	0.20	0.30	0.44	0.60	0.70	0.70	0.60	0.50	0.30	0.20	0.10	0.40
2015	0.10	0.20	0.30	0.40	0.50	0.70	0.70	0.63	0.54	0.20	M	M	M

* Averaged based off an adjusted value by NCDC due to missing data.

**Average based on month(s) that have missing data.

M = a month missing all or most data or a year with at least one month of missing data.



Average daily evaporation in inches by year at Death Valley, California.

Holiday Weather

Normals use the period from 1981 through 2010.

Statistics made from the entire period of record even if the holiday did not exist the entire period.

New Year's Day

	Normal	Highest	Lowest
Low Temperature	38	59 1931	21 1919
High Temperature	64	79 1936	48 1991
Precipitation	0.01"	0.20" 1922	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

Martin Luther King, Jr. Day

	Normal*	Highest	Lowest
Low Temperature	40	57 January 20, 1969 & January 19, 1976	26 January 20, 1919 & January 18, 1937
High Temperature	68	80 January 20, 1986	42 January 20, 1930
Precipitation	0.01"	0.15" January 18, 1993	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

*Not computed by NCEI.

Washington's Birthday

	Normal*	Highest	Lowest
Low Temperature	46	59 February 16, 1987	32 February 18, 1929
High Temperature	73	89 February 20, 1995	53 February 16, 2009
Precipitation	0.02"	0.30" February 16, 1959	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

*Not computed by NCEI.

Memorial Day

	Normal*	Highest	Lowest
Low Temperature	74	90 May 30, 1939	42 May 30, 1912
High Temperature	102	122 May 29, 2000	75 May 30, 1912
Precipitation	0.00"	0.11" May 30, 1948	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

*Not computed by NCEI.

Independence Day

	Normal	Highest	Lowest
Low Temperature	86	100 1915	67 1912 & 1992
High Temperature	115	126 1984, 1991 & 2007	100 1921
Precipitation	0.00"	Trace 1961	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

Labor Day

	Normal*	Highest	Lowest
Low Temperature	81	100 September 1, 1924 & September 3, 2007	60 September 5, 1921
High Temperature	111	121 September 3, 2007	100 September 1, 1941
Precipitation	0.00"	0.33" September 4, 1967	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

*Not computed by NCEI.

Columbus Day

	Normal*	Highest	Lowest
Low Temperature	63	74 October 9, 1922, October 9, 1933 & October 12, 2015	32 October 13, 1924
High Temperature	95	108 October 14, 1991	70 October 10, 1960
Precipitation	0.00"	0.50" October 8, 1923	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

*Not computed by NCEI.

Halloween

	Normal	Highest	Lowest
Low Temperature	55	70 1959	38 1924 & 1971
High Temperature	86	98 1966 & 1988	65 1920 & 1996
Precipitation	0.00"	0.40" 1996	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

Veterans Day

	Normal	Highest	Lowest
Low Temperature	50	63 November 11, 1914 & November 11, 2005	33 November 11, 1945
High Temperature	80	94 November 11, 1921	58 November 11, 1985
Precipitation	0.00"	0.75" November 11, 1954	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

Thanksgiving Day

	Normal*	Highest	Lowest
Low Temperature	43	67 November 26, 1970	27 November 30, 1911
High Temperature	72	86 November 23, 1950	45 November 27, 1919
Precipitation	0.00"	0.20" November 27, 1919	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

*Not computed by NCEI.

Christmas Day

	Normal	Highest	Lowest
Low Temperature	37	61 1914	22 1926, 1928 & 1990
High Temperature	64	81 1942	50 1920
Precipitation	0.01"	0.51" 1983	-
Snow	0.0"	0.0"	-
Snow Depth	0"	0"	-

El Niño and La Niña Episodes and Their Impact On The Weather In Death Valley

Introduction

El Niño and La Niña episodes have been shown in numerous studies to have large scale and regional impacts on weather patterns and seasonal climate averages. This study presents the observed values of temperature and precipitation values to see what, if any, correlations there are due to El Niño and La Niña episodes on a more local scale.

Methodology

Oceanic Niño Index (ONI) values, defined as sea surface temperature anomalies in the Niño 3.4 region (located at 5°N to 5°S and 120° to 170°W) of the eastern and central equatorial Pacific Ocean based on centered 30-year base periods updated every 5 years, were obtained from the Climate Prediction Center (CPC) for each year since 1950 to the present. These values were analyzed for departures of 0.5°C warmer than normal for at least five consecutive overlapping three month seasons which indicated an El Niño episode and departures of 0.5°C cooler than normal for at least five consecutive overlapping three month seasons which inferred a La Niña episode for the purposes of this report. It should be noted that this criteria is also what CPC uses to define El Niño and La Niña episodes. Episodes were then defined from a July-June period for simplistic purposes for the compilation of this report.

The next step was to rate El Niño and La Niña episodes into three categories – strong, moderate and weak based on ONI values. At least three consecutive three month periods with a given value were used to rate episodes. The thresholds for rating ONI values were obtained from correspondence with CPC in a previous study on El Niño and La Niña episodes done by the author.

For El Niño episodes events were defined as:

Weak – ONI values from +0.5°C to +0.9°C

Moderate – ONI values from +1.0°C to +1.8°C

High – ONI values greater than +1.8°C

For La Niña episodes events were defined as:

Weak – ONI values from -0.5°C to -0.9°C

Moderate – ONI values from -1.0°C to -1.8°C

High – ONI values greater than -1.8°C

Precipitation and Snowfall

The table below lists precipitation totals for the July through June period for years with an El Niño episode as well as for the November through April time frame in order to look at precipitation totals not influenced by the monsoon. In order to compute normals, totals for the 1981-2010 period were ranked from greatest to least and then split into thirds. Those values were then used to denote above normal (upper third), near normal (middle third) and below normal (bottom third). The cut-offs for these thresholds were then used as the thirty year normal for defining above normal, near normal and below normal precipitation. These cut-offs were then applied to any season that met El Niño criteria and the totals for a given season were then rated above normal (shown in green for precipitation and blue for snow), near normal (shown in black) and below normal (shown in brown for precipitation and purple for snow).

Episode	Strength of Episode	Death Valley July-June Precipitation Total	Death Valley July-June Seasonal Snowfall Total	Death Valley November-April Precipitation Total
1951-1952	Moderate	2.57"	0.0"	2.51"
1952-1953	Weak	1.07"	0.0"	0.94"
1953-1954	Weak	1.42"	0.0"	1.42"
1957-1958	Moderate	M	M	M
1963-1964	Moderate	1.51"	0.0"	0.37"
1965-1966	Moderate	2.03"	0.0"	1.55"
1968-1969	Moderate	2.66"	0.0"	2.42"
1969-1970	Moderate	2.23"	0.0"	1.73"
1972-1973	Strong	3.64"	0.0"	2.49"
1976-1977	Weak	2.74"	0.0"	0.24"
1977-1978	Weak	5.09"	0.0"	3.61"
1982-1983	Strong	3.37"	0.0"	2.85"
1986-1987	Moderate	1.96"	0.0"	1.66"
1987-1988	Moderate	5.78"	0.0"	5.41"
1991-1992	Moderate	2.78"	0.0"	2.56"
1994-1995	Moderate	3.42"*	0.0"	3.07"*
1997-1998	Strong	6.09"	0.0"	3.94"
2002-2003	Moderate	2.13"	0.0"	2.01"
2004-2005	Weak	6.44"	0.0"	5.44"
2006-2007	Weak	1.20"	0.0"	0.37"
2009-2010	Moderate	3.31"	0.0"	3.27"
30 Year Normal	N/A	2.36"	0.0"	1.80"
Average for Moderate and Strong Events	N/A	3.11"	0.0"	2.56"

* Missing data for December 1994.

Overall there appears to be a good correlation between El Niño episodes and near to above normal precipitation during both the water season and the cold season in Death Valley especially during strong events. The five wettest 24 hour precipitation totals in Death Valley ever recorded since 1949 were all during El Niño episodes, with four of these five occurring in the cold season and the other occurring from Tropical Storm Nora. Since 1911, there have only been 45 months in Death Valley that have recorded an inch or more of precipitation during the cold season from November through April. Since 1949, there are only 30 months that have reached this mark, with 20 months or 67 percent of them occurring during El Niño episodes. No snow has ever been recorded in Death Valley during an El Niño episode.

The table below lists precipitation totals for the July through June period for years with a La Niña episode as well as for the November through April time frame in order to look at precipitation totals not influenced by the monsoon. In order to compute normals, totals for the 1981-2010 period were ranked from greatest to least and then split into thirds. Those values were then used to denote above normal (upper third), near normal (middle third) and below normal (bottom third). The cut-offs for these thresholds were then used as the thirty year normal for defining above normal, near normal and below normal precipitation. These cut-offs were then applied to any season that met La Niña criteria and the totals for a given season were then rated above normal (shown in green for precipitation and blue for snow), near normal (shown in black) and below normal (shown in brown for precipitation and purple for snow).

Episode	Strength of Episode	Death Valley July-June Precipitation Total	Death Valley July-June Seasonal Snowfall Total	Death Valley November-April Precipitation Total
1949-1950	Moderate	0.19"	0.0"	0.05"
1950-1951	Weak	1.27"	0.0"	0.05"
1954-1955	Weak	1.97"	0.0"	1.14"
1955-1956	Moderate	0.41"	0.0"	0.41"
1956-1957	Weak	1.77"	0.0"	0.82"
1964-1965	Weak	2.36"	0.0"	1.52"
1970-1971	Moderate	1.19"	0.0"	1.04"
1971-1972	Weak	1.32"	0.0"	0.72"
1973-1974	Strong	1.90"	Trace	1.72"
1974-1975	Weak	2.61"	0.0"	1.11"
1975-1976	Moderate	3.44"	0.0"	2.57"
1983-1984	Weak	1.88"	0.0"	0.55"
1984-1985	Moderate	1.95"*	0.0"	M
1988-1989	Strong	0.68"	0.0"	0.05"
1995-1996	Weak	0.71"	0.0"	0.55"
1998-1999	Moderate	1.24"	0.0"	0.60"
1999-2000	Moderate	1.23"	0.0"	0.72"
2000-2001	Weak	2.70"	0.0"	2.43"
2005-2006	Weak	1.97"	0.0"	0.59"
2007-2008	Moderate	1.58"	0.0"	0.93"
2010-2011	Moderate	1.19"	0.0"	0.81"
2011-2012	Weak	2.15"	0.0"	0.30"
30 Year Normal	N/A	2.36"	0.0"	1.80"
Average for Moderate and Strong Events	N/A	1.36"	0.0"	0.89"

* Missing data for December 1984.

Overall there is a good correlation between La Niña episodes and near to below normal precipitation during both the water season and especially during the cold season at Death Valley. Moderate to strong events tended to have the best correlation to below normal precipitation. There were several interesting trends to note though. The La Niña episode of 1955-1956 had precipitation in just two months – November and April with the only measurable precipitation falling during April. The strong 1988-1989 La Niña episode had measurable precipitation in August, September, November and December and a trace in January but nothing in any month from February through June. The 1973-1974 La Niña, while strong, did result in near normal precipitation for the cold season. This was also the only La Niña episode where snow fell at Death Valley and one only of 4 winter seasons where snow has ever fallen here. Traces of snow fell on two days that month – the 4th and 5th. There has been a noted trend in the Southwest U.S. to see snow in La Niña winters in lower elevations.

Temperature

The table below lists the average temperature for meteorological winter (December through February) for years with an El Niño episode. In order to compute normals, average temperatures for the 1981-2010 period were ranked from greatest to least and then split into thirds. Those values were then used to denote above normal (upper third), near normal (middle third) and below normal (bottom third). The cut-offs for these thresholds were then used as the thirty year normal for defining above normal, near normal and below normal temperatures. These cut-offs were then applied to any season that met El Niño criteria and the totals for a given season were then rated above normal (shown in orange), near normal (shown in black) and below normal (shown in blue).

Episode	Strength of Episode	Death Valley Average Temperature
1951-1952	Moderate	53.6
1952-1953	Weak	55.6
1953-1954	Weak	56.0
1957-1958	Moderate	M
1963-1964	Moderate	53.3
1965-1966	Moderate	50.8
1968-1969	Moderate	52.8
1969-1970	Moderate	55.3
1972-1973	Strong	52.8
1976-1977	Weak	54.6
1977-1978	Weak	57.1
1982-1983	Strong	53.9
1986-1987	Moderate	55.0
1987-1988	Moderate	53.1
1991-1992	Moderate	54.5
1994-1995	Moderate	55.9
1997-1998	Strong	51.9
2002-2003	Moderate	56.9
2004-2005	Weak	56.9
2006-2007	Weak	54.8
2009-2010	Moderate	53.5
30 Year Normal	N/A	55.0
Average for Moderate and Strong Events	N/A	53.8

Overall temperatures in Death Valley during meteorological winter average near to below normal during El Niño episodes, especially during strong ones. The table below lists the average temperature for meteorological winter (December through February) for years with a La Niña episode. In order to compute normals, average temperatures for the 1981-2010 period were ranked from greatest to least and then split into thirds. Those values were then used to denote above normal (upper third), near normal (middle third) and below normal (bottom third). The cut-offs for these thresholds were then used as the thirty year normal for defining above normal, near normal and below normal temperatures. These cut-offs were then applied to any season that met La Niña criteria and the totals for a given season were then rated above normal (shown in orange), near normal (shown in black) and below normal (shown in blue).

Episode	Strength of Episode	Death Valley Average Temperature
1949-1950	Moderate	52.4
1950-1951	Weak	55.4
1954-1955	Weak	51.4
1955-1956	Moderate	54.3
1956-1957	Weak	54.5
1964-1965	Weak	57.0
1970-1971	Moderate	54.9
1971-1972	Weak	53.4
1973-1974	Strong	54.3
1974-1975	Weak	54.4
1975-1976	Moderate	57.0
1983-1984	Weak	55.7
1984-1985	Moderate	52.1
1988-1989	Strong	53.6
1995-1996	Weak	57.1
1998-1999	Moderate	55.7
1999-2000	Moderate	56.5
2000-2001	Weak	52.1
2005-2006	Weak	56.2
2007-2008	Moderate	54.4
2010-2011	Moderate	54.5
2011-2012	Weak	56.0
30 Year Normal	N/A	55.0
Average for Moderate and Strong Events	N/A	54.5

Overall the only correlation between La Niña episodes and temperatures during meteorological winter in Death Valley was during strong events when they averaged near normal. During weak to moderate events no correlation can be made.

Low Temperatures of 32 Degrees or Below

The table below lists the number of days with minimum temperatures of 32°F or below (above average years shown in blue) with an El Niño episode (July-June period).

Episode	Strength of Episode	Number of Days With Minimum Temperatures of 32 °F or Below At Death Valley
1951-1952	Moderate	13
1952-1953	Weak	4
1953-1954	Weak	12
1957-1958	Moderate	M
1963-1964	Moderate	15
1965-1966	Moderate	16
1968-1969	Moderate	18
1969-1970	Moderate	7
1972-1973	Strong	19
1976-1977	Weak	18
1977-1978	Weak	0
1982-1983	Strong	15
1986-1987	Moderate	1
1987-1988	Moderate	10
1991-1992	Moderate	6
1994-1995	Moderate	18
1997-1998	Strong	15
2002-2003	Moderate	1
2004-2005	Weak	3
2006-2007	Weak	11
2009-2010	Moderate	11
30 Year Normal	N/A	7.2
Average for Moderate and Strong Events	N/A	11.8

Overall there appears to be a good correlation for an above normal of days with a minimum temperature of 32 degrees or below during El Niños at Death Valley, especially during strong events.

The table below lists the number of days with minimum temperatures of 32°F or below (above average years shown in blue) with a La Niña episode (July-June period).

Episode	Strength of Episode	Number of Days With Minimum Temperatures of 32 °F or Below At Death Valley
1949-1950	Moderate	40
1950-1951	Weak	6
1954-1955	Weak	11
1955-1956	Moderate	9
1956-1957	Weak	12
1964-1965	Weak	11
1970-1971	Moderate	5
1971-1972	Weak	18
1973-1974	Strong	3
1974-1975	Weak	4
1975-1976	Moderate	6
1983-1984	Weak	2
1984-1985	Moderate	16
1988-1989	Strong	21
1995-1996	Weak	6
1998-1999	Moderate	12
1999-2000	Moderate	15
2000-2001	Weak	17
2005-2006	Weak	5
2007-2008	Moderate	6
2010-2011	Moderate	6
2011-2012	Weak	7
30 Year Normal	N/A	7.2
Average for Moderate and Strong Events	N/A	12.6

Overall no conclusion can be made about the number of low temperatures that reached 32 degrees or below in Death Valley during December when a La Niña occurs.

Acknowledgements

Thanks for this report are extended to numerous individuals. First, I would like to thank Michael Staudenmaier, former Meteorologist in Charge, and Stan Czyzyk, Science and Operations Officer here at the National Weather Service in Las Vegas for encouragement in pursuing this project and reviewing it for publication. Stan also deserves thanks for providing most of the material from the August 15, 2004 flash flood. I also would like to thank Donald Maker, now retired and the former Cooperative Program Manager and Operational Program Leader at the National Weather Service in Las Vegas, for his work in maintaining the cooperative weather station at Death Valley and willingness to work with me on climate record related issues with this station and numerous others. Additional thanks are extended to Charlie Callagan, of the National Park Service at Death Valley National Park, for sending me numerous weather records from copies at Death Valley to help improve the quality of the National Weather Service's datasets as well as in sharing his knowledge on the climate of Death Valley with me and overseeing the weather station here for many years. I also want to thank all of the National Park Service staff and previous cooperative observers who collected each individual weather report over the last 100 years which are the basis for compiling this report and the National Weather Service staff through the years who also helped collect this data at the Las Vegas, Oxnard, Los Angeles and San Francisco offices among others. NOAA's National Centers for Environmental Information (NCEI) staff in Asheville, North Carolina also deserves to be thanked for their work in helping me get needed data and corrections to existing data made in the national datasets for Death Valley. Lastly, I want to thank those who reviewed this paper for publication and provided comments to improve the quality of this report.